







THE LIBRARY
OF
THE UNIVERSITY
OF CALIFORNIA

PRESENTED BY
PROF. CHARLES A. KOFOID AND
MRS. PRUDENCE W. KOFOID

AMERICAN ORNITHOLOGY;
OR
THE NATURAL HISTORY
OF THE
BIRDS OF THE UNITED STATES.

ILLUSTRATED WITH PLATES

ENGRAVED AND COLOURED FROM ORIGINAL DRAWINGS TAKEN
FROM NATURE.

BY ALEXANDER WILSON.

WITH A SKETCH OF THE AUTHOR'S LIFE,
BY GEORGE ORD, F. L. S. &c.

IN THREE VOLS.—VOL. II.

PUBLISHED BY COLLINS & CO, NEW YORK,
AND
HARRISON HALL, PHILADELPHIA.
1828.

EASTERN DISTRICT OF PENNSYLVANIA, to wit:

BE IT REMEMBERED, That on the first day of August, in the fifty-third year of the independence of the United States of America, A. D. 1828, HARRISON HALL, of the said district, has deposited in this office the title of a book, the right whereof he claims as Proprietor, in the words following, to wit:

American Ornithology; or the Natural History of the Birds of the United States. Illustrated with plates engraved and coloured from original drawings taken from Nature. By Alexander Wilson. With a sketch of the Author's Life, by George Ord, F. L. S. &c. In three Volumes.—Vol. II.

In conformity to the act of the congress of the United States, entitled "An act for the encouragement of learning, by securing the copies of maps, charts, and books to the authors and proprietors of such copies during the times therein mentioned."—And also to the act, entitled, "An act supplementary to an act, entitled, "An act for the encouragement of learning, by securing the copies of maps, charts, and books, to the authors and proprietors of such copies during the times therein mentioned, and extending the benefits thereof to the arts of designing, engraving, and etching historical and other prints."

D. CALDWELL,
Clerk of the Eastern District of Pennsylvania.

k-QL631

W5

1828

v.2

Bul

-16.

CONTENTS OF VOL. II.

	Page.
<i>Picus principalis</i> , Ivory-billed Woodpecker, -	9
<i>pileatus</i> , Pileated Woodpecker, -	16
<i>auratus</i> , Golden-winged Woodpecker, -	19
<i>erythrocephalus</i> , Red-headed Woodpecker, -	27
<i>varius</i> , Yellow-bellied Woodpecker, -	32
<i>villosus</i> , Hairy Woodpecker, -	35
<i>pubescens</i> , Downy Woodpecker, -	38
<i>querulus</i> , Red-cockaded Woodpecker, -	44
<i>torquatus</i> , Lewis's Woodpecker, -	46
<i>Carolinus</i> , Red-bellied Woodpecker, -	48
<i>Sitta Carolinensis</i> , White-breasted Nuthatch, -	52
<i>varia</i> , Red-bellied Nuthatch, -	55
<i>pusilla</i> , Brown-headed Nuthatch, -	57
<i>Alcedo alcyon</i> , Belted Kingfisher, -	59
<i>Certhia familiaris</i> , Brown Creeper, -	63
<i>maculata</i> , Black and White Creeper, -	68
<i>Caroliniana</i> , Great Carolina Wren, -	70
<i>palustris</i> , Marsh Wren, -	73
<i>Trochilus colubris</i> , Humming-bird, -	76
<i>Sturnus prædatorius</i> , Red-winged Starling, -	85
<i>Turdus polyglottus</i> , Mocking-bird, -	94
<i>rufus</i> , Ferruginous Thrush, -	106
<i>melodus</i> , Wood Thrush, -	111
<i>solitarius</i> , Hermit Thrush, -	117
<i>mustelinus</i> , Tawny Thrush, -	120
<i>aquaticus</i> , Water Thrush, -	122
<i>aurocapillus</i> , Golden-crowned Thrush, -	124

M366855

<i>Fringilla linaria</i> , Lesser Red-poll, - - -	256
<i>passerina</i> , Yellow-winged Sparrow, - - -	260
<i>cyanea</i> , Indigo-bird, - - -	262
<i>Muscicapa tyrannus</i> , Tyrant Flycatcher, or King-bird, -	265
<i>crinita</i> , Great Crested Flycatcher, - - -	273
<i>nunciola</i> , Pewit Flycatcher, - - -	275
<i>rapax</i> , Wood Pewee Flycatcher, - - -	278
<i>querula</i> , Small Green Crested Flycatcher, - -	280
<i>ruticilla</i> , American Redstart, male, - - -	281
young bird, - - -	285
<i>cærulea</i> , Blue-gray Flycatcher, - - -	287
<i>sylvicola</i> , Yellow-throated Flycatcher, - -	289
<i>solitaria</i> , Solitary Flycatcher, - - -	291
<i>cantatrix</i> , White-eyed Flycatcher, - - -	293
<i>melodia</i> , Warbling Flycatcher, - - -	295
<i>olivacea</i> , Red-eyed Flycatcher, - - -	297
<i>cucullata</i> , Hooded Flycatcher, - - -	300
<i>Canadensis</i> , Canada Flycatcher, - - -	302
<i>pusilla</i> , Green Black-capt Flycatcher, - -	303
<i>minuta</i> , Small-headed Flycatcher, - - -	304
<i>Alauda magna</i> , Meadow Lark, - - -	306
<i>alpestris</i> , Shore Lark, - - -	310
<i>rufa</i> , Brown Lark, - - -	313
<i>Sylvia sialis</i> , Blue-bird, - - -	315
<i>calendula</i> , Ruby-crowned Wren, - - -	323
<i>Marylandica</i> , Maryland Yellow-throat, male, -	325
female, - - -	327
<i>regulus</i> , Golden-crested Wren, - - -	328
<i>domestica</i> , House Wren, - - -	331
<i>troglodytes</i> , Winter Wren, - - -	336
<i>flavicollis</i> , Yellow-throat Warbler, - - -	339
<i>castanea</i> , Bay-breasted Warbler, - - -	341
<i>Pennsylvanica</i> , Chestnut-sided Warbler, - -	343
<i>Philadelphia</i> , Mourning Warbler, - - -	345
<i>solitaria</i> , Blue-winged Yellow Warbler, - -	347
<i>chrysoptera</i> , Golden-winged Warbler, - - -	349
<i>citrinella</i> , Blue-eyed Yellow Warbler, - - -	351

<i>Sylvia Canadensis</i> , Black-throated Blue Warbler, -	353
<i>virens</i> , Black-throated Green Warbler, -	355
<i>coronata</i> , Yellow-rump Warbler, full plumage, -	356
winter dress, -	359
<i>cærulea</i> , Cærulean Warbler, - - -	361
<i>pinus</i> , Pine-creeping Warbler, - - -	363
<i>magnolia</i> , Black and Yellow Warbler, - -	365
<i>Blackburniæ</i> , Blackburnian Warbler, - -	367
<i>autumnalis</i> , Autumnal Warbler, - - -	368
<i>protonotarius</i> , Prothonotary Warbler, - -	369
<i>vermivora</i> , Worm-eating Warbler, - - -	371
<i>peregrina</i> , Tennessee Warbler, - - -	373
<i>formosa</i> , Kentucky Warbler, - - -	375
<i>minuta</i> , Prairie Warbler, - - -	377
<i>rara</i> , Blue-green Warbler, - - -	379
<i>rubricapilla</i> , Nashville Warbler, - - -	380
<i>pusilla</i> , Blue Yellow-back Warbler, - - -	381
<i>petechia</i> , Yellow Red-poll Warbler, - - -	383
<i>striata</i> , Black-poll Warbler, male, - - -	384
female, - - -	386
<i>agilis</i> , Connecticut Warbler, - - -	388
<i>leucoptera</i> , Pine-swamp Warbler, - - -	389
<i>montana</i> , Blue-mountain Warbler, - - -	391
<i>parus</i> , Hemlock Warbler, - - -	393
<i>maritima</i> , Cape-May Warbler, - - -	394
<i>Pipra polyglotta</i> , Yellow-breasted Chat, - - -	396
<i>Parus atricapillus</i> , Black-capt Titmouse, - - -	401
<i>bicolor</i> , Crested Titmouse, - - -	404
<i>Hirundo purpurea</i> , Purple Martin, - - -	406
<i>Americana</i> , Barn Swallow, - - -	412
<i>viridis</i> , White-bellied Swallow, - - -	422
<i>riparia</i> , Bank Swallow or Sand Martin, - -	424
<i>pelasgia</i> , Chimney Swallow, - - -	426
<i>Caprimulgus Carolinensis</i> , Chuck-Will's-Widow, -	436
<i>Americanus</i> , Night Hawk; - - -	440
<i>vociferus</i> , Whip-poor-will, - - -	446

AMERICAN ORNITHOLOGY.

GENUS XXII. PICUS. WOODPECKER.

SPECIES 1. *PICUS PRINCIPALIS*.

IVORY-BILLED WOODPECKER.

[Plate XXIX.—Fig. 1.]

Picus principalis, LINN. *Syst.* I, p. 173, 2.—GMEL. *Syst.* I, p. 425.
—*Picus niger Carolinensis cristatus*, BRISS. IV, p. 26, 9.—*Pic*
noir à bec blanc, BUFF. VII, p. 46.—*Pl. Enl.* 690.—*King of the*
Woodpeckers, KALM, vol. II, p. 85.—*White-billed Woodpecker*,
CATESB. *Car.* I, 16.—*Arct. Zool.* II, No. 156.—LATH. *Syn.* II, p.
553.—BARTRAM, p. 289.—PEALE'S *Museum*, No. 1884.

THIS majestic and formidable species, in strength and magnitude, stands at the head of the whole class of Woodpeckers hitherto discovered. He may be called the king or chief of his tribe; and Nature seems to have designed him a distinguished characteristic, in the superb carmine crest, and bill of polished ivory, with which she has ornamented him. His eye is brilliant and daring; and his whole frame so admirably adapted for his mode of life, and method of procuring subsistence, as to impress on the mind of the examiner the most reverential ideas of the Creator. His manners have also a dignity in them superior to the common herd of Woodpeckers. Trees, shrubbery, orchards, rails, fence-posts, and old prostrate logs, are alike interesting to those, in their humble and indefatigable search for prey; but the royal hunter now before us, scorns the humility of such situations, and seeks the most towering trees of the forest; seeming particularly attached to those prodigious cypress

swamps, whose crowded giant sons stretch their bare and blasted, or moss-hung, arms midway to the skies. In these almost inaccessible recesses, amid ruinous piles of impending timber, his trumpet-like note, and loud strokes, resound through the solitary, savage wilds, of which he seems the sole lord and inhabitant. Wherever he frequents, he leaves numerous monuments of his industry behind him. We there see enormous pine-trees, with cartloads of bark lying around their roots, and chips of the trunk itself in such quantities, as to suggest the idea that half a dozen of axemen had been at work for the whole morning. The body of the tree is also disfigured with such numerous and so large excavations, that one can hardly conceive it possible for the whole to be the work of a Woodpecker. With such strength, and an apparatus so powerful, what havoc might he not commit, if numerous, on the most useful of our forest trees; and yet with all these appearances, and much of vulgar prejudice against him, it may fairly be questioned whether he is at all injurious; or, at least, whether his exertions do not contribute most powerfully to the protection of our timber. Examine closely the tree where he has been at work, and you will soon perceive, that it is neither from motives of mischief nor amusement that he slices off the bark, or digs his way into the trunk.—For the sound and healthy tree is not in the least the object of his attention. The diseased, infested with insects, and hastening to putrefaction, are *his* favourites; there the deadly crawling enemy have formed a lodgement, between the bark and tender wood, to drink up the very vital part of the tree. It is the ravages of these vermin which the intelligent proprietor of the forest deploras, as the sole perpetrators of the destruction of his timber. Would it be believed that the larvæ of an insect, or fly, no larger than a grain of rice, should silently, and in one season, destroy some thousand acres of pine-trees, many of them from two to three feet in diameter, and a hundred and fifty feet high! Yet whoever passes along the high road from Georgetown to Charleston, in South Carolina, about twenty miles from the former place, can have striking and melancholy proofs of

this fact. In some places the whole woods, as far as you can see around you, are dead, stripped of the bark, their wintry-looking arms and bare trunks bleaching in the sun, and tumbling in ruins before every blast, presenting a frightful picture of desolation. And yet ignorance and prejudice stubbornly persist in directing their indignation against the bird now before us, the constant and mortal enemy of these very vermin, as if the hand that probed the wound, to extract its cause, should be equally detested with that which inflicted it; or as if the thief-catcher should be confounded with the thief. Until some effectual preventive, or more complete mode of destruction, can be devised against these insects, and their larvæ, I would humbly suggest the propriety of protecting, and receiving with proper feelings of gratitude, the services of this and the whole tribe of Woodpeckers, letting the odium of guilt fall to its proper owners.

In looking over the accounts given of the Ivory-billed Woodpecker by the naturalists of Europe, I find it asserted, that it inhabits from New Jersey to Mexico. I believe, however, that few of them are ever seen to the north of Virginia, and very few of them even in that state. The first place I observed this bird at, when on my way to the south, was about twelve miles north of Wilmington, in North Carolina. There I found the bird from which the drawing of the figure in the plate was taken. This bird was only wounded slightly in the wing, and on being caught, uttered a loudly-reiterated, and most piteous note, exactly resembling the violent crying of a young child; which terrified my horse so, as nearly to have cost me my life. It was distressing to hear it. I carried it with me in the chair, under cover, to Wilmington. In passing through the streets, its affecting cries surprised every one within hearing, particularly the females, who hurried to the doors and windows, with looks of alarm and anxiety. I drove on, and on arriving at the piazza of the hotel, where I intended to put up, the landlord came forward, and a number of other persons who happened to be there, all equally alarmed at what they heard; this was greatly increased by my asking whether he could furnish me with accommoda-

tions for myself and my baby. The man looked blank, and foolish, while the others stared with still greater astonishment. After diverting myself for a minute or two at their expense, I drew my Woodpecker from under the cover, and a general laugh took place. I took him up stairs, and locked him up in my room, while I went to see my horse taken care of. In less than an hour I returned, and on opening the door he set up the same distressing shout, which now appeared to proceed from grief that he had been discovered in his attempts at escape. He had mounted along the side of the window, nearly as high as the ceiling, a little below which he had begun to break through. The bed was covered with large pieces of plaster; the lath was exposed for at least fifteen inches square, and a hole, large enough to admit the fist, opened to the weather-boards; so that in less than another hour he would certainly have succeeded in making his way through. I now tied a string round his leg, and fastening it to the table, again left him. I wished to preserve his life, and had gone off in search of suitable food for him. As I reascended the stairs, I heard him again hard at work, and on entering had the mortification to perceive that he had almost entirely ruined the mahogany table to which he was fastened, and on which he had wreaked his whole vengeance. While engaged in taking the drawing, he cut me severely in several places, and on the whole, displayed such a noble and unconquerable spirit, that I was frequently tempted to restore him to his native woods. He lived with me nearly three days, but refused all sustenance, and I witnessed his death with regret.

The head and bill of this bird is in great esteem among the southern Indians, who wear them by way of amulet or charm, as well as ornament; and, it is said, dispose of them to the northern tribes at considerable prices. An Indian believes that the head, skin, or even feathers of certain birds, confer on the wearer all the virtues or excellences of those birds. Thus I have seen a coat made of the skins, heads and claws, of the raven; caps stuck round with heads of Butcher-birds, Hawks and Eagles; and as the disposition and courage of the Ivory-billed Wood-

pecker are well known to the savages, no wonder they should attach great value to it, having both beauty, and, in their estimation, distinguished merit to recommend it.

This bird is not migratory, but resident in the countries where it inhabits. In the low counties of the Carolinas, it usually prefers the large-timbered cypress swamps for breeding in. In the trunk of one of these trees, at a considerable height, the male and female alternately, and in conjunction, dig out a large and capacious cavity for their eggs and young. Trees thus dug out have frequently been cut down, with sometimes the eggs and young in them. This hole according to information, for I have never seen one myself, is generally a little winding, the better to keep out the weather, and from two to five feet deep. The eggs are said to be generally four, sometimes five, as large as a pullet's, pure white, and equally thick at both ends; a description that, except in size, very nearly agrees with all the rest of our Woodpeckers. The young begin to be seen abroad about the middle of June. Whether they breed more than once in the same season is uncertain.

So little attention do the people of the countries where these birds inhabit, pay to the minutiae of natural history, that, generally speaking, they make no distinction between the Ivory-billed and Pileated Woodpecker, represented in the same plate; and it was not till I showed them the two birds together, that they knew of any difference. The more intelligent and observing part of the natives, however, distinguish them by the name of the large and lesser *Log-cocks*. They seldom examine them but at a distance, gunpowder being considered too precious to be thrown away on Woodpeckers; nothing less than a Turkey being thought worth the value of a load.

The food of this bird consists, I believe, entirely of insects and their larvæ. The Pileated Woodpecker is suspected of sometimes tasting the Indian corn; the Ivory-billed never. His common note, repeated every three or four seconds, very much resembles the tone of a trumpet, or the high note of a clarinet, and can plainly be distinguished at the distance of more than

half a mile; seeming to be immediately at hand, though perhaps more than one hundred yards off. This it utters while mounting along the trunk, or digging into it. At these times it has a stately and novel appearance; and the note instantly attracts the notice of a stranger. Along the borders of the Savannah river, between Savannah and Augusta, I found them very frequently; but my horse no sooner heard their trumpet-like note, than remembering his former alarm, he became almost ungovernable.

The Ivory-billed Woodpecker is twenty inches long, and thirty inches in extent; the general colour is black, with a considerable gloss of green when exposed to a good light; iris of the eye vivid yellow; nostrils covered with recumbent white hairs; fore part of the head black, rest of the crest of a most splendid red, spotted at the bottom with white, which is only seen when the crest is erected, as represented in the plate; this long red plumage being ash-coloured at its base, above that white, and ending in brilliant red; a stripe of white proceeds from a point, about half an inch below each eye, passes down each side of the neck, and along the back, where they are about an inch apart, nearly to the rump; the first five primaries are wholly black, on the next five the white spreads from the tip higher and higher to the secondaries, which are wholly white from their coverts downwards: these markings, when the wings are shut, make the bird appear as if his back were white, hence he has been called, by some of our naturalists, the large White-backed Woodpecker; the neck is long; the beak an inch broad at the base, of the colour and consistence of ivory, prodigiously strong, and elegantly fluted; the tail is black, tapering from the two exterior feathers, which are three inches shorter than the middle ones, and each feather has the singularity of being greatly concave below; the wing is lined with yellowish white; the legs are about an inch and a quarter long, the exterior toe about the same length, the claws exactly semicircular and remarkably powerful, the whole of a light blue or lead colour. The female is about half an inch shorter, the bill rather less, and the whole plumage of the head black, glossed

with green; in the other parts of the plumage she exactly resembles the male. In the stomachs of three which I opened, I found large quantities of a species of worm called *borers*, two or three inches long, of a dirty cream-colour, with a black head; the stomach was an oblong pouch, not muscular like the gizzards of some others. The tongue was worm-shaped, and for half an inch at the tip as hard as horn, flat, pointed, of the same white colour as the bill, and thickly barbed on each side.

SPECIES 2. *PICUS PILEATUS*.

PILEATED WOODPECKER.

[Plate XXIX.—Fig. 2.]

Picus pileatus, LATH. *Ind. Orn.* I, p. 225, 4.—LINN. *Syst.* I, p. 173, 3.—GMEL. *Syst.* I, p. 425.—*Picus niger Virginianus cristatus*, BRISS. IV, p. 29, 10.—*Pic noir à huppe rouge*, BUFF. VII, p. 48.—*Pic noir huppe de la Louisiane*, PL. ENL. 718.—*Larger crested Woodpecker*, CATESB. *Car.* I, 17.—*Pileated Woodpecker*, ARCT. Zool. II, No. 157.—LATH. *Syn.* II, p. 554, 3.—*Id. Sup.* p. 105.—BARTRAM, p. 289.—PEALE'S *Museum*, No. 1886.

THIS American species is the second in size among his tribe, and may be styled the Great Northern Chief of the Woodpeckers, though, in fact, his range extends over the whole of the United States, from the interior of Canada to the gulf of Mexico. He is very numerous in the Genesee country, and in all the tracts of high-timbered forests, particularly in the neighbourhood of our large rivers, where he is noted for making a loud and almost incessant cackling before wet weather; flying at such times in a restless uneasy manner from tree to tree, making the woods echo to his outcry. In Pennsylvania, and the northern states, he is called the Black Woodcock; in the southern states, the Logcock. Almost every old trunk in the forest, where he resides, bears the marks of his chisel. Wherever he perceives a tree beginning to decay, he examines it round and round with great skill and dexterity, strips off the bark in sheets of five or six feet in length to get at the hidden cause of the disease, and labours with a gayety and activity really surprising. I have seen him separate the greatest part of the bark from a large dead pine-tree, for twenty or thirty feet, in less than a quarter of an hour.

Whether engaged in flying from tree to tree, in digging, climbing or barking, he seems perpetually in a hurry. He is extremely hard to kill, clinging close to the tree even after he has received his mortal wound; nor yielding up his hold but with his expiring breath. If slightly wounded in the wing, and dropt while flying, he instantly makes for the nearest tree, and strikes, with great bitterness, at the hand stretched out to seize him; and can rarely be reconciled to confinement. He is sometimes observed among the hills of Indian corn, and it is said by some that he frequently feeds on it. Complaints of this kind are, however, not general; many farmers doubting the fact, and conceiving that at these times he is in search of insects which lie concealed in the husk. I will not be positive that they never occasionally taste maize; yet I have opened and examined great numbers of these birds, killed in various parts of the United States, from lake Ontario to the Alatomaha river, but never found a grain of Indian corn in their stomachs.

The Pileated Woodpecker is not migratory, but braves the extremes of both the arctic and torrid regions. Neither is he gregarious, for it is rare to see more than one or two, or at the most three, in company. Formerly they were numerous in the neighbourhood of Philadelphia; but gradually as the old timber fell, and the country became better cleared, they retreated to the forest. At present few of those birds are to be found within ten or fifteen miles of the city.

Their nest is built, or rather the eggs are deposited, in the hole of a tree, dug out by themselves, no other materials being used but the soft chips of rotten wood. The female lays six large eggs of a snowy whiteness; and, it is said, they generally raise two broods in the same season.

This species is eighteen inches long, and twenty-eight in extent; the general colour is a dusky brownish black; the head is ornamented with a conical cap of bright scarlet; two scarlet mustaches proceed from the lower mandible; the chin is white; the nostrils are covered with brownish white hair-like feathers, and this stripe of white passes thence down the side of the neck

to the sides, spreading under the wings; the upper half of the wings, are white, but concealed by the black coverts; the lower extremities of the wings are black; so that the white on the wing is not seen but when the bird is flying, at which time it is very prominent; the tail is tapering, the feathers being very convex above and strong; the legs are of a leaden gray colour, very short, scarcely half an inch, the toes very long, the claws strong and semicircular, and of a pale blue; the bill is fluted, sharply ridged, very broad at the base, bluish black above, below and at the point bluish white; the eye is of a bright golden colour; the pupil black; the tongue, like those of its tribe, is worm-shaped, except near the tip, where for one-eighth of an inch it is horny, pointed, and beset with barbs.

The female has the forehead, and nearly to the crown, of a light brown colour, and the mustaches are dusky instead of red. In both, a fine line of white separates the red crest from the dusky line that passes over the eye.

SPECIES 3. *PICUS AURATUS*.

GOLDEN-WINGED WOODPECKER.

[Plate III.—Fig. 1.]

Le Pic aux ailes dorées, BUFFON, VII, 39. *Pl. Enl.* 693.—*Picus auratus*, LINN. *Syst.* 174.—*Cuculus alis de auratis*, KLEIN, p. 30.—CATESBY, I, 18.—LATHAM, II, 597.—BARTRAM, p. 289.—PEALE'S *Museum*, No. 1938.*

THIS elegant bird is well known to our farmers and junior sportsmen, who take every opportunity of destroying him; the former for the supposed trespasses he commits on their Indian corn, or the trifle he will bring in market, and the latter for the mere pleasure of destruction, and perhaps for the flavour of his flesh, which is in general esteem. In the state of Pennsylvania he can scarcely be called a bird of passage, as even in severe winters they may be found within a few miles of the city of Philadelphia; and I have known them exposed for sale in market every week during the months of November, December and January, and that too in more than commonly rigorous weather. They, no doubt, partially migrate, even here; being much more numerous in spring and fall than in winter. Early in the month of April they begin to prepare their nest, which is built in the hollow body or branch of a tree, sometimes, though not always, at a considerable height from the ground; for I have frequently known them fix on the trunk of an old apple-tree, at not more than six feet from the root. The sagacity of this bird in discovering, under a sound bark, a hollow limb or trunk of a tree, and its perseverance in perforating it for the purpose of incuba-

* We add the following synonyms:—*Cuculus auratus*, LINN. *Syst. ed.* 10, 1, 112.—GMEL. *Syst.* 1, 430.—LATH. *Ind. Orn.* p. 242.—*Picus Canadensis striatus*, BRISS. 4, 72.—PENN. *Arct. Zool.* No. 158.

tion, are truly surprising; the male and female alternately relieving and encouraging each other by mutual caresses, renewing their labours for several days, till the object is attained, and the place rendered sufficiently capacious, convenient and secure. At this employment they are so extremely intent, that they may be heard till a very late hour in the evening, thumping like carpenters. I have seen an instance where they had dug first five inches straight forwards, and then downwards more than twice that distance, through a solid black oak. They carry in no materials for their nest, the soft chips, and dust of the wood, serving for this purpose. The female lays six white eggs, almost transparent. The young early leave the nest, and, climbing to the higher branches, are there fed by their parents.

The food of this bird varies with the season. As the common cherries, bird-cherries, and berries of the sour gum, successively ripen, he regales plentifully on them, particularly on the latter; but the chief food of this species, or that which is most usually found in his stomach, is wood-lice, and the young and larvæ of ants, of which he is so immoderately fond, that I have frequently found his stomach distended with a mass of these, and these only, as large nearly as a plum. For the procuring of these insects, nature has remarkably fitted him. The bills of Woodpeckers, in general, are straight, grooved or channelled, wedge-shaped, and compressed to a thin edge at the end, that they may the easier penetrate the hardest wood; that of the Golden-winged Woodpecker is long, slightly bent, ridged only on the top, and tapering almost to a point, yet still retaining a little of the wedge form there. Both, however, are admirably adapted to the peculiar manner each has of procuring its food. The former, like a powerful wedge, to penetrate the dead and decaying branches, after worms and insects; the latter, like a long and sharp pick-axe, to dig up the hillocks of pismires, that inhabit old stumps in prodigious multitudes. These beneficial services would entitle him to some regard from the husbandman, were he not accused, and perhaps not without just cause, of being too partial to the Indian corn, when in that state which is usually called

roasting-ears. His visits are indeed rather frequent about this time; and the farmer, suspecting what is going on, steals through among the rows with his gun, bent on vengeance, and forgetful of the benevolent sentiment of the poet;—that

“———— Just as wide of *justice* he must fall
Who thinks all made for One, not one for all.”

But farmers, in general, are not much versed in poetry, and pretty well acquainted with the value of corn, from the hard labour requisite in raising it.

In rambling through the woods one day, I happened to shoot at one of these birds, and wounded him slightly in the wing. Finding him in full feather, and seemingly but little hurt, I took him home, and put him into a large cage, made of willows, intending to keep him in my own room, that we might become better acquainted. As soon as he found himself inclosed on all sides, he lost no time in idle fluttering, but throwing himself against the bars of the cage, began instantly to demolish the willows, battering them with great vehemence, and uttering a loud piteous kind of cackling, similar to that of a hen when she is alarmed, and takes to wing. Poor Baron Trenck never laboured with more eager diligence at the walls of his prison, than this son of the forest in his exertions for liberty; and he exercised his powerful bill with such force, digging into the sticks, seizing and shaking them so from side to side, that he soon opened for himself a passage; and though I repeatedly repaired the breach, and barricadoed every opening in the best manner I could, yet on my return into the room, I always found him at large, climbing up the chairs, or running about the floor, where, from the dexterity of his motions, moving backwards, forwards, and sideways, with the same facility, it became difficult to get hold of him again. Having placed him in a strong wire cage, he seemed to give up all hopes of making his escape, and soon became very tame; fed on young ears of Indian corn; refused apples, but ate the berries of the sour gum greedily, small winter grapes, and several other kinds of berries; exercised himself frequently in

climbing, or rather hopping perpendicularly along the sides of the cage; and as evening drew on, fixed himself in a high hanging or perpendicular position, and slept with his head in his wing. As soon as dawn appeared, even before it was light enough to perceive him distinctly across the room, he descended to the bottom of the cage, and began his attack on the ears of Indian corn, rapping so loud as to be heard from every room in the house. After this he would sometimes resume his former position, and take another nap. He was beginning to become very amusing, and even sociable, when, after a lapse of several weeks, he became drooping, and died, as I conceived, from the effects of his wound.

Some European naturalists, (and among the rest Linnæus himself, in his tenth edition of the *Systema Naturæ*,) have classed this bird with the genus *Cuculus*, or Cuckoo, informing their readers that it possesses many of the habits of the Cuckoo; that it is almost always on the ground; is never seen to climb trees like the other Woodpeckers, and that its bill is altogether unlike theirs; every one of which assertions I must say is incorrect, and could have only proceeded from an entire unacquaintance with the manners of the bird. Except in the article of the bill, and that, as has been before observed, is still a little wedge-formed at the point, it differs in no one characteristic from the rest of its genus. Its nostrils are covered with tufts of recumbent hairs or small feathers; its tongue is round, worm-shaped, flattened towards the tip, pointed, and furnished with minute barbs; it is also long, missile, and can be instantaneously protruded to an uncommon distance. The *os hyoides*, or internal parts of the tongue, like those of its tribe, is a substance for strength and elasticity resembling whalebone, divided into two branches, each the thickness of a knitting-needle, that pass, one on each side of the neck, to the hind-head, where they unite, and run up along the scull in a groove, covered with a thin membrane or sheath; descend into the upper mandible by the right side of the right nostril, and reach to within half an inch of the point of the bill, to which they are attached by another extremely elastic mem-

brane, that yields when the tongue is thrown out, and contracts as it is retracted. In the other Woodpeckers we behold the same apparatus, differing a little in different species. In some these cartilaginous substances reach only to the top of the cranium; in others they reach to the nostril; and in one species they are wound round the bone of the right eye, which projects considerably more than the left for its accommodation.

The tongue of the Golden-winged Woodpecker, like the others, is also supplied with a viscid fluid, secreted by two glands, that lie under the ear on each side, and are at least five times larger in this species than in any other of its size; with this the tongue is continually moistened, so that every small insect it touches instantly adheres to it. The tail, in its strength and pointedness, as well as the feet and claws, prove that the bird was designed for climbing; and in fact I have scarcely ever seen it on a tree five minutes at a time without climbing; hopping not only upwards and downwards, but spirally; pursuing and playing with its fellow, in this manner, round the body of the tree. I have also seen them a hundred times alight on the trunk of the tree; though they more frequently alight on the branches; but that they climb, construct like nests, lay the same number, and the like coloured eggs, and have the manners and habits of the Woodpeckers, is notorious to every American naturalist; while neither in the form of their body, nor any other part, except in the bill being somewhat bent, and the toes placed two before, and two behind, have they the smallest resemblance whatever to the Cuckoo.

It may not be improper, however, to observe, that there is another species of Woodpecker, called also Golden-winged,* which inhabits the country near the Cape of Good Hope, and resembles the present, it is said, almost exactly in the colour and form of its bill, and in the tint and markings of its plumage; with this difference, that the mustaches are red instead of black, and the lower side of the wings, as well as their shafts, are also red, where the other is golden yellow. It is also considerably

* *Picus cafer*, TURTON'S LINN.

less. With respect to the habits of this new species, we have no particular account; but there is little doubt that they will be found to correspond with the one we are now describing.

The abject and degraded character which the count de Buffon, with equal eloquence and absurdity, has drawn of the whole tribe of Woodpeckers, belongs not to the elegant and sprightly bird now before us. How far it is applicable to any of them will be examined hereafter. He is not "constrained to drag out an insipid existence in boring the bark and hard fibres of trees to extract his prey," for he frequently finds in the loose mouldering ruins of an old stump, (the capital of a nation of pismires) more than is sufficient for the wants of a whole week. *He* cannot be said to "lead a mean and gloomy life, without an intermission of labour," who usually feasts by the first peep of dawn, and spends the early, and sweetest hours of morning, on the highest peaks of the tallest trees, calling on his mate or companions; or pursuing and gamboling with them round the larger limbs, and body of the tree, for hours together; for such are really his habits. Can it be said that "necessity never grants an interval of sound repose" to that bird, who, while other tribes are exposed to all the peltings of the midnight storm, lodges dry and secure in a snug chamber of his own constructing? or that "the narrow circumference of a tree circumscribes *his* dull round of life," who, as seasons and inclination inspire, roams from the frigid to the torrid zone, feasting on the abundance of various regions? Or is it a proof that "his appetite is never softened by delicacy of taste," because he so often varies his bill of fare, occasionally preferring to animal food the rich milkiness of young Indian corn, and the wholesome and nourishing berries of the Wild Cherry, Sour Gum, and Red Cedar? Let the reader turn to the faithful representation of him given in the plate, and say whether his looks be "sad and melancholy!" It is truly ridiculous and astonishing that such absurdities should escape the lips or pen of one so able to do justice to the respective merits of every species; but Buffon had too often a favourite theory to prop up, that led him insensibly astray; and so, for-

sooth, the whole family of Woodpeckers must look sad, sour, and be miserable, to satisfy the caprice of a whimsical philosopher, who takes it into his head that they are, and ought to be, so.

But the count is not the only European who has misrepresented and traduced this beautiful bird. One has given him brown legs,* another a yellow neck;† a third has declared him a Cuckoo,‡ and in an English translation of Linnæus's System of Nature, lately published, he is characterized as follows: "transversely striate with black and gray; chin and breast black; does not climb trees;"§ which is just as correct as if, in describing the human species, we should say—skin striped with black and green; cheeks blue; chin orange; never walks on foot, &c. The pages of natural history should resemble a faithful mirror, in which mankind may recognize the true images of the living originals; instead of which we find this department of them, too often, like the hazy and rough medium of wretched window glass, through whose crooked protuberances every thing appears so strangely distorted, that one scarcely knows their most intimate neighbours and acquaintance.

The Golden-winged Woodpecker has the back and wings above of a dark umber, transversely marked with equidistant streaks of black; upper part of the head an iron gray; cheeks and parts surrounding the eyes, a fine cinnamon colour; from the lower mandible a strip of black, an inch in length, passes down each side of the throat, and a lunated spot, of a vivid blood red, covers the hindhead, its two points reaching within half an inch of each eye; the sides of the neck, below this, incline to a bluish gray; throat and chin a very light cinnamon or fawn colour; the breast is ornamented with a broad crescent of deep black; the belly and vent white, tinged with yellow, and scattered with innumerable round spots of black, every feather having a distinct central spot, those on the thighs and vent being heart-shaped and largest; the lower or inner side of the wing and tail, shafts of all the larger feathers, and indeed of almost every feather,

* See Encycl. Brit. Art. PICUS. † LATHAM. ‡ KLEIN.

§ Turton's Linnæus, vol. i, p. 264.

are of a beautiful golden yellow—that on the shafts of the primaries being very distinguishable, even when the wings are shut; the rump is white, and remarkably prominent; the tail-coverts white, and curiously serrated with black; upper side of the tail, and the tip below, black, edged with light loose filaments of a cream colour, the two exterior feathers serrated with whitish; shafts black towards the tips, the two middle ones nearly wholly so; bill an inch and a half long, of a dusky horn colour, somewhat bent, ridged only on the top, tapering, but not to a point, that being a little wedge-formed; legs and feet light blue; iris of the eye hazel; length twelve inches, extent twenty. The female differs from the male chiefly in the greater obscurity of the fine colours, and in wanting the black mustaches on each side of the throat. This description, as well as the drawing, was taken from a very beautiful and perfect specimen.

Though this species, generally speaking, is migratory, yet they often remain with us in Pennsylvania during the whole winter. They also inhabit the continent of North America, from Hudson's Bay to Georgia; and have been found, by voyagers, on the northwest coast of America. They arrive at Hudson's Bay in April, and leave it in September. Mr. Hearne, however, informs us, that "the Golden-winged Woodpecker is almost the only species of Woodpecker that winters near Hudson's Bay." The natives there call it *Ou-thee-quan-nor-ow*, from the golden colour of the shafts and lower side of the wings. It has numerous provincial appellations in the different states of the Union, such as "High-hole," from the situation of its nest, and "Hittock," "Yucker," "Piut," "Flicker," by which last it is usually known in Pennsylvania. These names have probably originated from a fancied resemblance of its notes to the sound of the words; for one of its most common cries consists of two notes or syllables, frequently repeated, which, by the help of the hearer's imagination, may easily be made to resemble any or all of them.

SPECIES 4. *PICUS ERYTHROCEPHALUS*.

RED-HEADED WOODPECKER.

[Plate IX.—Fig. 1.]

Picus erythrocephalus, LINN. *Syst.* I, 174, 7.—GMEL. *Syst.* I, 429.

—*Pic noir à domino rouge*. BUFFON, VII, 55. *Pl. Enl.* 117.—CARTESBY, I, 20.—*Arct. Zool.* II, No. 160.—LATH. *Syn.* II, 561.—PEALE'S *Museum*, No. 1922.*

THERE is perhaps no bird in North America more universally known than this. His tri-coloured plumage, red, white, and black glossed with steel blue, is so striking, and characteristic; and his predatory habits in the orchards and corn-fields, added to his numbers, and fondness for hovering along the fences, so very notorious, that almost every child is acquainted with the Red-headed Woodpecker. In the immediate neighbourhood of our large cities, where the old timber is chiefly cut down, he is not so frequently found; and yet at this present time, June, 1808, I know of several of their nests, within the boundaries of the city of Philadelphia. Two of these are in Buttonwood trees (*Platanus occidentalis*,) and another in the decayed limb of an elm. The old ones, I observe, make their excursions regularly to the woods beyond the Schuylkill, about a mile distant; preserving great silence and circumspection in visiting their nests; precautions not much attended to by them in the depth of the woods, because there the prying eye of man is less to be dreaded. Towards the mountains, particularly in the vicinity of creeks and rivers, these birds are extremely abundant, especially in the latter end of summer. Wherever you travel

* We add the following synonyms:—*Picus obscurus*, GMEL. *Syst.* I, 429. young.—LATH. *Ind. Orn.* 228.—*Picus Virginianus erythrocephalus*, BRISS. 4, p. 52.

in the interior, at that season, you hear them screaming from the adjoining woods, rattling on the dead limbs of trees or on the fences, where they are perpetually seen flitting from stake to stake, on the road side before you. Wherever there is a tree, or trees, of the wild-cherry, covered with ripe fruit, there you see them busy among the branches; and in passing orchards, you may easily know where to find the earliest, sweetest apples, by observing those trees, on or near which the Red-headed Woodpecker is skulking; for he is so excellent a connoisseur in fruit, that wherever an apple or pear is found broached by him, it is sure to be among the ripest and best flavoured. When alarmed, he seizes a capital one by striking his open bill deep into it, and bears it off to the woods. When the Indian corn is in its rich, succulent, milky state, he attacks it with great eagerness, opening a passage through the numerous folds of the husk, and feeding on it with voracity. The girdled, or deadened timber, so common among corn-fields, in the back settlements, are his favourite retreats, whence he sallies out to make his depredations. He is fond of the ripe berries of the sour gum; and pays pretty regular visits to the cherry-trees, when loaded with fruit. Towards Fall, he often approaches the barn, or farm-house, and raps on the shingles and weather-boards. He is of a gay and frolicsome disposition; and half a dozen of the fraternity are frequently seen diving and vociferating around the high dead limbs of some large tree, pursuing and playing with each other, and amusing the passenger with their gambols. Their note or cry is shrill and lively, and so much resembles that of a species of tree frog, which frequents the same tree, that it is sometimes difficult to distinguish the one from the other.

Such are the *vicious* traits, if I may so speak, in the character of the Red-headed Woodpecker; and I doubt not but from what has been said on this subject, that some readers would consider it meritorious to exterminate the whole tribe, as a nuisance; and in fact the legislatures of some of our provinces, in former times, offered premiums, to the amount of twopence per head, for their

destruction.* But let us not condemn the species unheard. They exist; they must therefore be necessary. If their merits and usefulness be found, on examination, to preponderate against their vices, let us avail ourselves of the former, while we guard, as well as we can, against the latter.

Though this bird occasionally regales himself on fruit, yet his natural, and most useful, food is insects, particularly those numerous and destructive species that penetrate the bark and body of the tree, to deposit their eggs and larvæ, the latter of which are well known to make immense havoc. That insects are his natural food, is evident from the construction of his wedge-formed bill, the length, elasticity, and figure of his tongue, and the strength and position of his claws; as well as from his usual habits. In fact, insects form at least two-thirds of his subsistence; and his stomach is scarcely ever found without them. He searches for them with a dexterity and intelligence, I may safely say, more than human; he perceives by the exterior appearance of the bark where they lurk below; when he is dubious, he rattles vehemently on the outside with his bill, and his acute ear distinguishes the terrified vermin shrinking within to their inmost retreats, where his pointed and barbed tongue soon reaches them. The masses of bugs, caterpillars, and other larvæ, which I have taken from the stomachs of these birds, have often surprised me. These larvæ, it should be remembered, feed not only on the buds, leaves and blossoms, but on the very vegetable life of the tree, the alburnum, or newly forming bark and wood; the consequence is, that whole branches, and whole trees, decay, under the silent ravages of these destructive vermin; witness the late destruction of many hundred acres of pine-trees in the north-eastern parts of South Carolina;† and the thousands of peach-trees that yearly decay from the same cause. Will any

* Kalm.

† In one place, on a tract of two thousand acres of pine land, on the Sampit river, near Georgetown, at least ninety trees in every hundred were destroyed by this pernicious insect, a small, black, winged bug, resembling the weavel, but somewhat longer.

one say, that taking half a dozen, or half a hundred, apples from a tree, is equally ruinous with cutting it down? or, that the services of a useful animal should not be rewarded with a small portion of that which it has contributed to preserve? We are told, in the benevolent language of the Scriptures, not to muzzle the mouth of the ox that treadeth out the corn; and why should not the same generous liberality be extended to this useful family of birds, which forms so powerful a phalanx against the inroads of many millions of destructive vermin.

The Red-headed Woodpecker is, properly speaking, a bird of passage; though even in the eastern states, individuals are found during moderate winters, as well as in the states of New York and Pennsylvania; in Carolina they are somewhat more numerous during that season; but not one-tenth of what are found in summer. They make their appearance in Pennsylvania about the first of May; and leave us about the middle of October. They inhabit from Canada to the gulf of Mexico, and are also found on the western coast of North America. About the middle of May they begin to construct their nests, which, like the rest of the genus, they form in the body, or large limbs, of trees, taking in no materials, but smoothing it within to the proper shape and size. The female lays six eggs, of a pure white; and the young make their first appearance about the twentieth of June. During the first season, the head and neck of the young birds are blackish gray, which has occasioned some European writers to mistake them for females; the white on the wing is also spotted with black; but in the succeeding spring they receive their perfect plumage, and the male and female then differ only in the latter being rather smaller, and her colours not quite so vivid; both have the head and neck deep scarlet; the bill light blue, black towards the extremity, and strong; back, primaries, wing-coverts and tail, black, glossed with steel blue; rump, lower part of the back, secondaries, and whole under parts, from the breast downwards, white; legs and feet bluish green; claws light blue; round the eye a dusky narrow skin, bare of feathers; iris dark hazel; total length nine inches and a half, extent seventeen

inches. The figure in the plate was drawn and coloured from a very elegant living specimen.

Notwithstanding the care which this bird, in common with the rest of its genus, takes to place its young beyond the reach of enemies, within the hollows of trees; yet there is one deadly foe, against whose depredations neither the height of the tree, nor the depth of the cavity, is the least security. This is the Black snake (*Coluber constrictor*,) who frequently glides up the trunk of the tree, and, like a skulking savage, enters the Woodpecker's peaceful apartment, devours the eggs or helpless young, in spite of the cries and flutterings of the parents; and, if the place be large enough, coils himself up in the spot they occupied, where he will sometimes remain for several days. The eager school-boy, after hazarding his neck to reach the Woodpecker's hole, at the triumphant moment when he thinks the nestlings his own, and strips his arm, lanching it down into the cavity, and grasping what he conceives to be the callow young, starts with horror at the sight of a hideous snake, and almost drops from his giddy pinnacle, retreating down the tree with terror and precipitation. Several adventures of this kind have come to my knowledge; and one of them that was attended with serious consequences; where both snake and boy fell to the ground; and a broken thigh, and long confinement, cured the adventurer completely of his ambition for robbing Woodpecker's nests.

SPECIES 5. *PICUS VARIUS*.

YELLOW-BELLIED WOODPECKER.

[Plate IX.—Fig. 2.]

Picus varius, LINN. *Syst.* I, 176, 20.—GMEL. *Syst.* I, 438.—*Lepic varie de la Caroline*, BUFF. VII, 77. *Pl. Enl.* 785.—*Yellow-bellied Woodpecker*, CATESB. I, 21.—*Arct. Zool.* II, No. 166.—LATH. *Syn.* II, 574, 20. *Id. Sup.* p. 109.—PEALE'S *Museum*, No. 2004.

THIS beautiful species is one of our resident birds. It visits our orchards in the month of October, in great numbers; is occasionally seen during the whole winter and spring; but seems to seek the depths of the forest, to rear its young in; for during summer, it is rarely seen among our settlements; and even in the intermediate woods, I have seldom met with it in that season. According to Brisson, it inhabits the continent from Cayenne to Virginia; and I may add, as far as to Hudson's Bay; where according to Hutchins, they are called *Mekisewe Pauptaw*;^{*} they are also common in the states of Kentucky and Ohio, and have been seen in the neighbourhood of St. Louis. They are reckoned by Georgi, among the birds that frequent the lake Baikal, in Asia,[†] but their existence there has not been satisfactorily ascertained.

The habits of this species are similar to those of the Hairy and Downy Woodpeckers, with which it generally associates; and which are both represented in the same plate. The only nest of this bird which I have met with, was in the body of an old pear-tree, about ten or eleven feet from the ground. The hole was almost exactly circular, small for the size of the bird, so that it crept in and out with difficulty, but suddenly widen-

^{*} Latham.

[†] Ibid.

ed, descending by a small angle, and then running downwards about fifteen inches. On the smooth solid wood lay four white eggs. This was about the twenty-fifth of May. Having no opportunity of visiting it afterwards, I cannot say whether it added any more eggs to the number; I rather think it did not, as it appeared, at that time, to be sitting.

The Yellow-bellied Woodpecker is eight inches and a half long, and in extent fifteen inches; whole crown a rich and deep scarlet, bordered with black on each side, and behind forming a slight crest, which it frequently erects;* from the nostrils, which are thickly covered with recumbent hairs, a narrow strip of white runs downward, curving round the breast, mixing with the yellowish white on the lower part of the breast; throat the same deep scarlet as the crown, bordered with black, proceeding from the lower mandible on each side, and spreading into a broad rounding patch on the breast; this black, in birds of the first and second year, is dusky gray, the feathers being only crossed with circular touches of black; a line of white, and below it another of black, proceed, the first from the upper part of the eye, the other from the posterior half of the eye, and both lose themselves on the neck and back; back dusky yellow, sprinkled and elegantly waved with black; wings black, with a large oblong spot of white; the primaries tipped and spotted with white; the three secondaries, next the body, are also variegated with white; rump white, bordered with black; belly yellow; sides under the wings more dusky yellow, marked with long arrow-heads of black; legs and feet greenish blue; tail black, consisting of ten feathers, the two outward feathers, on each side tipped with white, the next totally black, the fourth edged on its inner vane, half way down, with white, the middle one white on its interior vane, and spotted with black; tongue flat, horny for half an inch at the tip, pointed, and armed along its sides with reflected barbs; the other extremities of the tongue pass up behind the scull in a groove, and end near the right nos-

* This circumstance seems to have been overlooked by naturalists.

tril; in birds of the first and second year, they reach only to the crown; bill an inch long, channelled, wedge-formed at the tip, and of a dusky horn colour. The female is marked nearly as the male, but wants the scarlet on the throat, which is whitish; she is also darker under the wings, and on the sides of the breast. The young of the first season, of both sexes, in October, have the crown sprinkled with black and deep scarlet; the scarlet on the throat may be also observed in the young males. The principal food of these birds is insects; and they seem particularly fond of frequenting orchards, boring the trunks of the apple-trees, in their eager search after them. On opening them, the liver appears very large, and of a dirty gamboge colour; the stomach strongly muscular, and generally filled with fragments of beetles and gravel. In the morning they are extremely active in the orchards, and rather shyer than the rest of their associates. Their cry is also different, but though it is easily distinguishable in the woods, cannot be described by words.

SPECIES 6. *PICUS VILLOsus*.

HAIRY WOODPECKER.

[Plate IX.—Fig. 3.]

Picus villosus, LINN. *Syst.* I, 175, 16.—*Pic chevelu de Virginie*, BUFFON, VII, 74.—*Pic varie mâle de Virginie*, Pl. Enl. 754.—*Hairy Woodpecker*, CATESBY, I, 19, fig. 2.—*Arct. Zool.* II, No. 164.—LATH. *Syn.* II, 572, 18. *Id. Sup.* 108.—PEALE'S *Museum*, No. 1988.

THIS is another of our resident birds, and, like the former, a hunter of orchards, and borer of apple-trees, an eager hunter of insects, their eggs and larvæ, in old stumps, and old rails, in rotten branches, and crevices of the bark; having all the characters of the Woodpecker strongly marked. In the month of May, he retires with his mate to the woods, and either seeks out a branch already hollow, or cuts out an opening for himself. In the former case, I have known his nest more than five feet distant from the mouth of the hole; and in the latter, he digs first horizontally, if in the body of the tree, six or eight inches, and then downwards, obtusely, for twice that distance; carrying up the chips with his bill, and scraping them out with his feet. They also not unfrequently choose the orchard for breeding in; and even an old stake of the fence, which they excavate for this purpose. The female lays five white eggs, and hatches in June. This species is more numerous than the last in Pennsylvania, and more domestic; frequently approaching the farm-house, and skirts of the town. In Philadelphia, I have many times observed them examining old ragged trunks of the willow and poplar, while people were passing immediately below. Their cry is strong, shrill and tremulous; they have also a single note or *chuck*, which they often repeat, in an eager manner, as they

hop about, and dig into the crevices of the tree. They inhabit the continent, from Hudson's Bay to Carolina and Georgia.

The Hairy Woodpecker is nine inches long, and fifteen in extent; crown black; line over and under the eye white; the eye is placed in a black line, that widens as it descends to the back; hind-head scarlet, sometimes intermixed with black; nostrils hid under remarkably thick, bushy, recumbent hairs or bristles; under the bill are certain long hairs thrown forward, and upwards, as represented in the figure; bill a bluish horn colour, grooved, wedged at the end, straight, and about an inch and a quarter long; touches of black, proceeding from the lower mandible, end in a broad black stripe, that joins the black on the shoulder; back black, divided by a broad lateral strip of white, the feathers composing which, are loose and unwebbed, resembling hairs, whence its name; rump and shoulders of the wing, black; wings black, tipped and spotted with white, three rows of spots being visible on the secondaries, and five on the primaries; greater wing-coverts also spotted with white; tail as in the others, cuneiform, consisting of ten strong-shafted and pointed feathers, the four middle ones black, the next partially white, the two exterior ones white, tinged at the tip with a brownish burnt colour; tail-coverts black; whole lower side pure white; legs, feet and claws, light blue, the latter remarkably large and strong; inside of the mouth flesh coloured; tongue pointed, beset with barbs, and capable of being protruded more than an inch and a half; the *os hyoides*, in this species, pass on each side of the neck, ascend the skull, pass down toward the nostril, and are wound round the bone of the right eye, which projects considerably more than the left for its accommodation. The great mass of hairs, that cover the nostril, appears to be designed as a protection to the front of the head, when the bird is engaged in digging holes into the wood. The membrane, which encloses the brain, in this, as in all the other species of Woodpeckers, is also of extraordinary strength, no doubt to prevent any bad effects from violent concussion, while the bird is employed in digging for food. The female wants the red on the hind-head;

and the white below is tinged with brownish. The manner of flight of these birds has been already described, under a former species, as consisting of alternate risings and sinkings. The Hairy Woodpeckers generally utter a loud tremulous scream, as they set off, and when they alight. They are hard to kill, and, like the Red-headed Woodpecker, hang by the claws, even of a single foot, as long as a spark of life remains, before they drop.

This species is common at Hudson's Bay; and has lately been found in England. Dr. Latham examined a pair, which were shot near Halifax, in Yorkshire; and on comparing the male with one brought from North America, could perceive no difference, but in a slight interruption of the red that marked the hind-head of the former; a circumstance which I have frequently observed in our own. The two females corresponded exactly.

SPECIES 7. *PICUS PUBESCENS.*

DOWNY WOODPECKER.

[Plate IX.—Fig. 4.]

Picus pubescens, LINN. *Syst.* I, 175, 15.—GMEL. *Syst.* I, 435.—*Petit Pic varie de Virginie*, BUFFON, VII, 76.—*Smallest Woodpecker*, CATESB. I, 21.—*Arct. Zool.* II, No. 165.—*Little Woodpecker*, LATH. *Syn.* II, 573, 19. *Id. Sup.* 109.—PEALE'S *Museum*, No. 1986.

THIS is the smallest of our Woodpeckers, and so exactly resembles the former in its tints and markings, and in almost every thing, except its diminutive size, that I wonder how it passed through the count de Buffon's hands, without being branded as "a spurious race, degenerated by the influence of food, climate, or some unknown cause." But though it has escaped this infamy, charges of a much more heinous nature have been brought against it, not only by the writer above mentioned, but by the whole venerable body of zoologists in Europe, who have treated of its history, viz. that it is almost constantly boring and digging into apple-trees; and that it is the most destructive of its whole genus to the orchards. The first part of this charge I shall not pretend to deny; how far the other is founded in truth, will appear in the sequel. Like the two former species, it remains with us the whole year. About the middle of May, the male and female look out for a suitable place for the reception of their eggs and young. An apple, pear or cherry tree, often in the near neighbourhood of the farmhouse, is generally pitched upon for this purpose. The tree is minutely reconnoitred for several days, previous to the operation, and the work is first begun by the male, who cuts out a hole in the solid wood, as circular as if described with a pair of

compasses. He is occasionally relieved by the female, both parties working with the most indefatigable diligence. The direction of the hole, if made in the body of the tree, is generally downwards, by an angle of thirty or forty degrees, for the distance of six or eight inches, and then straight down for ten or twelve more; within roomy, capacious, and as smooth as if polished by the cabinet-maker; but the entrance is judiciously left just so large as to admit the body of the owner. During this labour, they regularly carry out the chips, often strewing them at a distance to prevent suspicion. This operation sometimes occupies the chief part of a week. Before she begins to lay, the female often visits the place, passes out and in, examines every part, both of the exterior and interior, with great attention, as every prudent tenant of a new house ought to do, and at length takes complete possession. The eggs are generally six, pure white, and laid on the smooth bottom of the cavity. The male occasionally supplies the female with food, while she is sitting; and about the last week in June, the young are perceived making their way up the tree, climbing with considerable dexterity. All this goes on with great regularity, where no interruption is met with; but the House Wren, who also builds in the hollow of a tree, but who is neither furnished with the necessary tools, nor strength for excavating such an apartment for himself, allows the Woodpeckers to go on, till he thinks it will answer his purpose, then attacks them with violence and generally succeeds in driving them off. I saw, some weeks ago, a striking example of this, where the Woodpeckers we are now describing, after commencing in a cherry-tree, within a few yards of the house, and having made considerable progress, were turned out by the Wren: the former began again on a pear-tree in the garden, fifteen or twenty yards off, whence, after digging out a most complete apartment, and one egg being laid, they were once more assaulted by the same impertinent intruder, and finally forced to abandon the place.

The principal characteristics of this little bird are diligence, familiarity, perseverance, and a strength and energy in the head,

and muscles of the neck, which are truly astonishing. Mounted on the infected branch of an old apple-tree, where insects have lodged their corroding and destructive brood, in crevices between the bark and wood, he labours sometimes, for half an hour, incessantly at the same spot, before he has succeeded in dislodging and destroying them. At these times you may walk up pretty close to the tree, and even stand immediately below it, within five or six feet of the bird, without in the least embarrassing him; the strokes of his bill are distinctly heard several hundred yards off; and I have known him to be at work for two hours together on the same tree. Buffon calls this, "incessant toil and slavery,"—their attitude, "a painful posture,"—and their life, "a dull and insipid existence;" expressions improper, because untrue; and absurd, because contradictory. The posture is that for which the whole organization of his frame is particularly adapted; and though to a Wren, or a Humming-bird, the labour would be both toil and slavery, yet to him it is, I am convinced, as pleasant, and as amusing, as the sports of the chase to the hunter, or the sucking of flowers to the Humming-bird. The eagerness with which he traverses the upper and lower sides of the branches; the cheerfulness of his cry, and the liveliness of his motions while digging into the tree, and dislodging the vermin, justify this belief. He has a single note, or *chink*, which, like the former species, he frequently repeats. And when he flies off, or alights on another tree, he utters a rather shriller cry, composed of nearly the same kind of note, quickly reiterated. In fall and winter, he associates with the Titmouse, Creeper, &c. both in their wood and orchard excursions; and usually leads the van. Of all our Woodpeckers, none rid the apple-trees of so many vermin as this, digging off the moss, which the negligence of the proprietor had suffered to accumulate, and probing every crevice. In fact, the orchard is his favourite resort in all seasons; and his industry is unequalled, and almost incessant, which is more than can be said of any other species we have. In Fall, he is particularly fond of boring the apple-trees for insects, digging a circular hole through

the bark, just sufficient to admit his bill, after that a second, third, &c. in pretty regular horizontal circles round the body of the tree; these parallel circles of holes are often not more than an inch, or an inch and an half, apart, and sometimes so close together, that I have covered eight or ten of them at once with a dollar. From nearly the surface of the ground, up to the first fork, and sometimes far beyond it, the whole bark of many apple-trees are perforated in this manner, so as to appear as if made by successive discharges of buck-shot; and our little Woodpecker, the subject of the present account, is the principal perpetrator of this supposed mischief. I say *supposed*, for so far from these perforations of the bark being ruinous, they are not only harmless, but, I have good reason to believe, really beneficial to the health and fertility of the tree. I leave it to the philosophical botanist to account for this; but the fact I am confident of. In more than fifty orchards, which I have myself carefully examined, those trees which were marked by the Woodpecker, (for some trees they never touch, perhaps because not penetrated by insects) were uniformly the most thriving, and seemingly the most productive; many of these were upwards of sixty years old, their trunks completely covered with holes, while the branches were broad, luxuriant, and loaded with fruit. Of *decayed* trees, more than three-fourths were untouched by the Woodpecker. Several intelligent farmers, with whom I have conversed, candidly acknowledge the truth of these observations, and with justice look upon these birds as beneficial; but the most common opinion is, that they bore the tree to suck the sap, and so destroy its vegetation; though pine and other resinous trees, on the juices of which it is not pretended they feed, are often found equally perforated. Were the *sap* of the tree their object, the saccharine juice of the birch, the sugar-maple, and several others, would be much more inviting, because more sweet and nourishing, than that of either the pear or apple-tree; but I have not observed one mark on the former, for ten thousand that may be seen on the latter; besides, the early part of spring is the season when the sap flows most abundantly; where-

as it is only during the months of September, October, and November, that Woodpeckers are seen so indefatigably engaged in orchards, probing every crack and crevice, boring through the bark, and, what is worth remarking, chiefly on the south and south-west sides of the tree, for the eggs and larvæ deposited there, by the countless swarms of summer insects. These, if suffered to remain, would prey upon the very vitals, if I may so express it, of the tree, and in the succeeding summer, give birth to myriads more of their race, equally destructive.

Here then is a whole species, I may say genus, of birds, which Providence seems to have formed for the protection of our fruit and forest trees, from the ravages of vermin; which every day destroy millions of those noxious insects, that would otherwise blast the hopes of the husbandman; and which even promote the fertility of the tree; and, in return, are proscribed by those who ought to have been their protectors; and incitements and rewards held out for their destruction! Let us examine better into the operations of nature, and many of our mistaken opinions, and groundless prejudices, will be abandoned for more just, enlarged, and humane, modes of thinking.

The length of the Downy Woodpecker is six inches and three quarters, and its extent twelve inches; crown black; hind-head deep scarlet; stripe over the eye white; nostrils thickly covered with recumbent hairs, or small feathers, of a cream colour: these, as in the preceding species, are thick and bushy, as if designed to preserve the forehead from injury during the violent action of digging; the back is black, and divided by a lateral strip of white, loose, downy, unwebbed feathers; wings black, spotted with white; tail-coverts, rump, and four middle feathers of the tail, black; the other three on each side white, crossed with touches of black; whole under parts, as well as the sides of the neck, white; the latter marked with a streak of black, proceeding from the lower mandible, exactly as in the Hairy Woodpecker; legs and feet bluish green; claws light blue, tipped with black; tongue formed like that of the preceding species, horny towards the tip, where for one-eighth of an inch it is

barbed; bill of a bluish horn colour, grooved, and wedge-formed, like most of the genus; eye dark hazel. The female wants the red on the hind-head, having that part white; and the breast and belly are of a dirty white.

This, and the two former species, are generally denominated *Sap-suckers*; they have also several other provincial appellations, equally absurd, which it may, perhaps, be more proper to suppress, than to sanction by repeating.

SPECIES 8. PICUS QUERULUS.

RED-COCKADED WOODPECKER.

[Plate XV.—Fig. 1.]

PEALE'S *Museum*, No. 2027.

THIS new species I first discovered in the pine woods of North Carolina. The singularity of its voice, which greatly resembles the chirping of young nestlings, and the red streak on the side of its head, suggested the specific name I have given it. It also extends through South Carolina and Georgia, at least as far as the Altamaha river. Observing the first specimen I found to be so slightly marked with red, I suspected it to be a young bird, or imperfect in its plumage, but the great numbers I afterwards shot, satisfied me that this is a peculiarity of the species. It appeared exceedingly restless, active, and clamorous; and every where I found its manners the same.

This bird seems to be an intermediate link between the Red-bellied and the Hairy Woodpecker, represented in plates VII and IX of this work. It has the back of the former, and the white belly and spotted neck of the latter; but wants the breadth of red in both, and is less than either. A preserved specimen has been deposited in the Museum of this city.

This Woodpecker is seven inches and a half long, and thirteen broad; the upper part of the head is black; the back barred with twelve white, transversely, semicircular lines, and as many of black, alternately; the cheeks and sides of the neck are white; whole lower parts the same; from the lower mandible, a list of black passes towards the shoulder of the wing, where it is lost in small black spots on each side of the breast; the wings are black, spotted with white; the four middle tail feathers black, the rest white spotted with black; rump black, variegated with white;

the vent white, spotted with black; the hairs that cover the nostrils are of a pale cream colour; the bill deep slate; but what forms the most distinguishing peculiarity of this bird, is a fine line of vermilion, on each side of the head, seldom occupying more than the edge of a single feather. The female is destitute of this ornament; but in the rest of her plumage differs in nothing from the male. The iris of the eye, in both, was hazel.

The stomachs of all those I opened were filled with small black insects, and fragments of large beetles. The posterior extremities of the tongue reached nearly to the base of the upper mandible.

SPECIES 9. PICUS TORQUATUS.

LEWIS'S WOODPECKER.

[Plate XX.—Fig. 3.]

PEALE'S *Museum*, No. 2020.

OF this very beautiful, and singularly marked, species, I am unable to give any farther account than as relates to its external appearance. Several skins of this species were preserved; all of which I examined with care; and found little or no difference among them, either in the tints or disposition of the colours.

The length of this was eleven inches and a half; the back, wings, and tail, were black, with a strong gloss of green; upper part of the head the same; front, chin, and cheeks, beyond the eyes, a dark rich red; round the neck passes a broad *collar* of white, which spreads over the breast, and looks as if the fibres of the feathers had been silvered; these feathers are also of a particular structure, the fibres being separate, and of a hair-like texture; belly deep vermilion, and of the same strong hair-like feathers, intermixed with silvery ones; vent black; legs and feet dusky, inclining to greenish blue; bill dark horn colour.

For a more particular, and, doubtless, a more correct account of this, and the two preceding species,* the reader is referred to General Clark's History of the Expedition, now preparing for the press. The three birds I have here introduced, are but a small part of the valuable collection of new subjects in natural history, discovered, and preserved, amidst a thousand dangers and difficulties, by those two enterprising travellers, whose intrepidity was only equalled by their discretion, and by their active and laborious pursuit of whatever might tend to render

* Wilson here alludes to Clark's Crow, and the Louisiana Tanager, both of which are figured in the same plate with Lewis's Woodpecker.

their journey useful to science and to their country. It was the request, and particular wish, of Captain Lewis, made to me in person, that I should make drawings of such of the feathered tribes as had been preserved, and were new. That brave soldier, that amiable and excellent man, over whose solitary grave in the wilderness I have since shed tears of affliction, having been cut off in the prime of his life, I hope I shall be pardoned for consecrating this humble note to his memory, until a more able pen shall do better justice to the subject.

SPECIES 10. PICUS CAROLINUS.

RED-BELLIED WOODPECKER.

[Plate VII.—Fig. 2.]

Picus Carolinus, LINN. *Syst.* I, 174, 10.—*Pic varie de la Jamaïque*, BUFFON, VII, 72, *Pl. Enl.* 597.—*Picus varius medius Jamaicensis*, SLOAN. *Jam.* 299, 15.—*Jamaica Woodpecker*, EDW. 244.—CATESB. I, 19, *fig.* 2.—*Arct. Zool.* II, No. 161.—LATH. *Syn.* II, 570, 17. *Id.* 571, 17. *A. Id. B.*—*Pic raye de la Louisiane*, BUFF. VII, 73, *Pl. Enl.* 692.—PEALE'S *Museum*, No. 1944.

THIS species possesses all the restless and noisy habits so characteristic of its tribe. It is more shy, and less domestic, than the Red-headed Woodpecker, (*P. erythrocephalus*,) or any of the other spotted Woodpeckers. It is also more solitary. It prefers the largest, high-timbered woods, and tallest decayed trees of the forest; seldom appearing near the ground, on the fences, or in orchards, or open fields; yet where the trees have been deadened, and stand pretty thick, in fields of Indian corn, as is common in new settlements, I have observed it to be very numerous; and have found its stomach sometimes completely filled with that grain. Its voice is hoarser than any of the others; and its usual note, *chow*, has often reminded me of the barking of a little lap-dog. It is a most expert climber, possessing extraordinary strength in the muscles of its feet and claws, and moves about the body, and horizontal limbs, of the trees, with equal facility in all directions. It rattles, like the rest of the tribe, on the dead limbs, and with such violence as to be heard, in still weather, more than half a mile off; and listens to hear the insects it has alarmed. In the lower side of some lofty branch, that makes a considerable angle with the horizon, the male and female, in conjunction, dig out a circular cavity for their nest, sometimes out of the solid wood, but more generally

into a hollow limb, twelve or fifteen inches above where it becomes solid. This is usually performed early in April. The female lays five eggs, of a pure white, or almost semi-transparent; and the young generally make their appearance towards the latter end of May, or beginning of June, climbing up to the higher parts of the tree, being as yet unable to fly. In this situation they are fed for several days, and often become the prey of the Hawks. From seeing the old ones continuing their caresses after this period, I believe that they often, and perhaps always, produce two broods in a season. During the greater part of the summer, the young have the ridge of the neck and head of a dull brownish ash; and a male of the third year has received his complete colours.

The Red-bellied Woodpecker is ten inches in length, and seventeen in extent; the bill is nearly an inch and a half in length, wedged at the point, but not quite so much grooved as some others, strong, and of a bluish black colour; the nostrils are placed in one of these grooves, and covered with curving tufts of light brown hairs, ending in black points; the feathers on the front stand more erect than usual, and are of a dull yellowish red; from thence along the whole upper part of the head and neck, down the back, and spreading round to the shoulders, is of the most brilliant golden glossy red; the whole cheeks, line over the eye, and under side of the neck, is a pale buff colour, which on the breast and belly deepens into a yellowish ash, stained on the belly with a blood red; the vent and thigh feathers are dull white, marked down their centres with heart-formed, and long arrow-pointed, spots of black. The back is black, crossed with transverse curving lines of white; the wings are also black, the lesser wing-coverts circularly tipt, and the whole primaries and secondaries beautifully crossed with bars of white, and also tipt with the same; the rump is white, interspersed with touches of black; the tail-coverts white near their extremities; the tail consists of ten feathers, the two middle ones black, their interior webs or vanes white, crossed with diagonal spots of black; these, when the edges of the two fea-

thers just touch, coincide, and form heart-shaped spots; a narrow sword-shaped line of white runs up the exterior side of the shafts of the same feathers; the next four feathers, on each side, are black, the outer edges of the exterior ones barred with black and white, which, on the lower side, seems to cross the whole vane as in the figure; the extremities of the whole tail, except the outer feather, are black, sometimes touched with yellowish or cream colour; the legs and feet are of a bluish green, and the iris of the eye red. The tongue, or *os hyoides*, passes up over the hind-head, and is attached by a very elastic retractile membrane, to the base of the right nostril; the extremity of the tongue is long, horny, very pointed, and thickly edged with barbs, the other part of the tongue is worm-shaped. In several specimens, I found the stomach nearly filled with pieces of a species of fungus, that grows on decayed wood, and in all with great numbers of insects, seeds, gravel, &c. &c. The female differs from the male, in having the crown, for an inch, of a fine ash, and the black not so intense; the front is reddish as in the male, and the whole hind-head, down to the back, likewise of the same rich red as his. In the bird, from which this latter description was taken, I found a large cluster of minute eggs, to the number of fifty or upwards, in the beginning of the month of March.

This species inhabits a large extent of country, in all of which it seems to be resident, or nearly so. I found them abundant in Upper Canada, and in the northern parts of the state of New York, in the month of November; they also inhabit the whole Atlantic states as far as Georgia, and the southern extremity of Florida; as well as the interior parts of the United States, as far west as Chillicothe, in the state of Ohio, and, according to Buffon, Louisiana. They are said to be the only Woodpeckers found in Jamaica; though I question whether this be correct; and to be extremely fond of the capsicum, or Indian pepper.* They are certainly much hardier birds, and capable of subsisting on coarser, and more various fare, and of sustaining a greater de-

* Sloane.

gree of cold, than several others of our Woodpeckers. They are active and vigorous; and being almost continually in search of insects, that injure our forest trees, do not seem to deserve the injurious epithets that almost all writers have given them. It is true, they frequently perforate the timber in pursuit of these vermin, but this is almost always in dead and decaying parts of the tree, which are the nests and nurseries of millions of destructive insects. Considering matters in this light I do not think their services overpaid by all the ears of Indian corn they consume; and would protect them within my own premises as being more useful than injurious.

GENUS XXV. SITTA. NUTHATCH.

SPECIES 1. *S. CAROLINENSIS*.

WHITE-BREASTED NUTHATCH.

[Plate II.—Fig. 3.]

Sitta Carolinensis, BRISS. III, p. 596.—CATESB. I, 22, fig. 2.—
LATH. I, 650, B.—*Sitta Europea*, Gray black-capped Nuthatch,
BARTRAM, p. 289.—PEALE'S *Museum*, No. 2036.

THE bill of this bird is black, the upper mandible straight, the lower one rounded upwards, towards the point, and white near the base; the nostrils are covered with long curving black hairs; the tongue is of a horny substance, and ending in several sharp points; the general colour above is of a light blue or lead; the tail consists of twelve feathers, the two middle ones lead colour, the next three are black, tipped with white for one-tenth, one-fourth, and half of an inch; the two next are also black, tipped half an inch or more with white, which runs nearly an inch up their exterior edges, and both have the white at the tips touched with black; the legs are of a purple or dirty flesh colour; the hind claw is much the largest; the inside of the wing at the bend is black; below this is a white spot spreading over the roots of the first five primaries; the whole length is five inches and a half, extent eleven.

Mr. Pennant considers this bird as a mere variety of the European Nuthatch; but if difference in size, colour and habits, be sufficient characteristics of a distinct species, this bird is certainly entitled to be considered as such. The head and back of the European species is of a uniform bluish gray; the upper parts of the head, neck, and shoulders of ours are a deep black, glossed with green; the breast and belly of the former is a dull orange,

with streaks of chestnut, those parts in the latter are pure white. The European has a line of black passing through the eye, half way down the neck; the present species has nothing of the kind; but appears with the inner webs of the three shortest secondaries, and the primaries, of a jet black; the latter tipped with white, and the vent and lower parts of the thighs of a rust colour; the European therefore, and the present, are evidently two distinct and different species.

This bird builds its nest early in April, in the hole of a tree; in a hollow rail in the fence; and sometimes in the wooden cornice under the eaves; and lays five eggs, of a dull white, spotted with brown at the greater end. The male is extremely attentive to the female while sitting, supplying her regularly with sustenance, stopping frequently at the mouth of the hole, calling and offering her what he has brought, in the most endearing manner. Sometimes he seems to stop merely to inquire how she is, and to lighten the tedious moments with his soothing chatter. He seldom rambles far from the spot, and when danger appears, regardless of his own safety, he flies instantly to alarm her. When both are feeding on the trunk of the same tree, or of adjoining ones, he is perpetually calling on her; and, from the momentary pause he makes, it is plain that he feels pleased to hear her reply.

The White-breasted Nuthatch is common almost every where in the woods of North America; and may be known at a distance by the notes *quank, quank*, frequently repeated, as he moves upward and down, in spiral circles, around the body, and larger branches, of the tree, probing behind the thin scaly bark of the white oak, and shelling off considerable pieces of it, in search after spiders, ants, insects and their larvæ. He rests and roosts with his head downwards; and appears to possess a degree of curiosity not common to many birds; frequently descending, very silently, within a few feet of the root of the tree where you happen to stand, stopping, head downward, stretching out his neck in a horizontal position, as if to reconnoitre your appearance; and after several minutes of silent observation, wheel-

ing round, he again mounts, with fresh activity, piping his unisons as before. Strongly attached to his native forests, he seldom forsakes them; and amidst the rigours of the severest winter weather, his note is still heard in the bleak and leafless woods, and among the howling branches. Sometimes the rain, freezing as it falls, encloses every twig, and even the trunk of the tree, in a hard transparent coat or shell of ice. On these occasions, I have observed his anxiety and dissatisfaction, at being with difficulty able to make his way along the smooth surface; at these times generally abandoning the trees, gleaning about the stables around the house, mixing among the fowls, entering the barn, and examining the beams and rafters, and every place where he may pick up a subsistence.

The name Nuthatch has been bestowed on this family of birds from their supposed practice of breaking nuts by repeated hatchings, or hammerings with their bills. Soft-shelled nuts, such as chestnuts, chinkopins, and hazel-nuts, they may probably be able to demolish, though I have never yet seen them so engaged; but it must be rather in search of maggots that sometimes breed there, than for the kernel. It is however said that they lay up a large store of nuts for winter; but as I have never either found any of their magazines, or seen them collecting them, I am inclined to doubt the fact. From the great numbers I have opened at all seasons of the year, I have every reason to believe that ants, small seeds, insects and their larvæ, form their chief subsistence, such matters alone being uniformly found in their stomachs. Neither can I see what necessity they could have to circumambulate the trunks of trees, with such indefatigable and restless diligence, while bushels of nuts lay scattered round their roots. As to the circumstance mentioned by Dr. Plott, of the European Nuthatch "putting its bill into a crack in the bough of a tree, and making such a violent sound, as if it was rending asunder," this, if true, would be sufficient to distinguish it from the species we have been just describing, which possesses no such faculty. The female differs little from the male in colour, chiefly in the black being less deep on the head and wings.

SPECIES 2. SITTA VARIA.

RED-BELLIED NUTHATCH.

[Plate II.—Fig. 4.]

Sitta Canadensis, BRISS. III, p. 592.—*Small Nuthatch*, LATH. I, 651.—*Sitta Varia*, BART. p. 289.

THIS bird is much smaller than the last, measuring only four inches and a half in length, and eight inches in extent. In the form of its bill, tongue, nostrils, and in the colour of the back and tail-feathers, it exactly agrees with the former; the secondaries are not relieved with the deep black of the other species, and the legs, feet, and claws, are of a dusky greenish yellow; the upper part of the head is black, bounded by a stripe of white passing round the frontlet; a line of black passes through the eye to the shoulder; below this is another line of white; the chin is white; the other under parts a light rust colour; the primaries and whole wings a dusky lead colour. The breast and belly of the female is not of so deep a brown, and the top of the head less intensely black.

This species is migratory, passing from the north, where they breed, to the southern states in October, and returning in April. Its voice is sharper, and its motions much quicker than those of the other, being so rapid, restless and small, as to make it a difficult point to shoot one of them. When the two species are in the woods together, they are easily distinguished by their voices, the note of the least being nearly an octave sharper than that of its companion, and repeated more hurriedly. In other respects their notes are alike unmusical and monotonous. Approaching so near to each other in their colours and general habits, it is probable that their mode of building, &c. may be also similar.

Buffon's *Torchepot du Canada*, Canada Nuthatch of other European writers, is either a young bird of the present species, in its imperfect plumage, or a different sort that rarely visits the United States. If the figure (Pl. Enl. 623) be correctly coloured, it must be the latter, as the tail and head appear of the same bluish gray or lead colour as the back. The young birds of this species, it may be observed, have also the crown of a lead colour during the first season; but the tail feathers are marked nearly as those of the old ones. Want of precision in the figures and descriptions of these authors, makes it difficult to determine; but I think it very probable, that *Sitta Jamaicensis minor*, Briss.; the Least Loggerhead of Brown, *Sitta Jamaicensis*, Linn.; and *Sitta Canadensis* of Linn. Gmel. and Briss., are names that have been originally applied to different individuals of the species we are now describing.

This bird is particularly fond of the seeds of pine trees. You may traverse many thousand acres of oak, hickory and chestnut woods, during winter, without meeting with a single individual; but no sooner do you enter among the pines than, if the air be still, you have only to listen for a few moments, and their note will direct you where to find them. They usually feed in pairs, climbing about in all directions, generally accompanied by the former species, as well as by the Black-capt Titmouse, *Parus atricapillus*, and the Crested Titmouse, *Parus bicolor*, and not unfrequently by the small Spotted Woodpecker, *Picus pubescens*; the whole company proceeding regularly from tree to tree through the woods, like a corps of pioneers; while in a calm day the rattling of their bills, and the rapid motions of their bodies, thrown like so many tumblers and rope-dancers into numberless positions, together with the peculiar chatter of each, are altogether very amusing; conveying the idea of hungry diligence, bustle and activity. Both these little birds, from the great quantity of destructive insects and larvæ they destroy, both under the bark, and among the tender buds of our fruit and forest trees, are entitled to, and truly deserving of, our esteem and protection.

SPECIES 3. SITTA PUSILLA.

BROWN-HEADED NUTHATCH.

[Plate XV.—Fig. 2.]

Sitta pusilla, LATH. *Ind. Orn.* 263.—*Small Nuthatch*, CATESBY, *Car.* 1, 22, *upper figure*.—*La Petite Sittelle à tête brune*, BUFF. v, 474.—BRISS. III, 598.—LATH. I, 651. *C.*—PEALE'S *Museum*, No. 2040.

THIS bird is chiefly an inhabitant of Virginia, and the southern states, and seems particularly fond of pine trees. I have never yet discovered it either in Pennsylvania, or any of the regions north of this. Its manners are very similar to those of the Red-bellied Nuthatch, represented in Plate II of this work; but its notes are more shrill and chirping. In the countries it inhabits it is a constant resident; and in winter associates with parties, of eight or ten, of its own species, who hunt busily from tree to tree, keeping up a perpetual screeching. It is a frequent companion of the Woodpecker figured beside it; and you rarely find the one in the woods without observing or hearing the other not far off. It climbs equally in every direction, on the smaller branches, as well as on the body of the tree, in search of its favourite food, small insects and their larvæ. It also feeds on the seeds of the pine tree. I have never met with its nest.

This species is four inches and a quarter long, and eight broad; the whole upper part of the head and neck, from the bill to the back, and as far down as the eyes, is light brown, or pale ferruginous, shaded with darker touches, with the exception of a spot of white near the back; from the nostril through the eyes the brown is deepest, making a very observable line

there; the chin, and sides of the neck, under the eyes, are white; the wings dusky; the coverts and three secondaries next the body a slate or lead colour; which is also the colour of the rest of the upper parts; the tail is nearly even at the end, the two middle feathers slate colour, the others black, tipped with slate, and crossed diagonally with a streak of white; legs and feet dull blue; upper mandible black, lower blue at the base; iris hazel. The female differs in having the brown on the head rather darker, and the line through the eye less conspicuous.

This diminutive bird is little noticed in history, and what little has been said of it, by Europeans, is not much to its credit. It is characterized as "a very stupid bird," which may easily be knocked down, from the sides of the tree, with one's cane. I confess I found it a very dexterous climber; and so rapid and restless in its motions, as to be shot with difficulty. Almost all very small birds seem less suspicious of man than large ones; but that activity and restless diligence should constitute *stupidity*, is rather a new doctrine. Upon the whole, I am of opinion, that a person who should undertake the destruction of these birds, at even a dollar a head for all he knocked down with his cane, would run a fair chance of starving by his profession.

GENUS XXIV. *ALCEDO*. KINGSFISHER.

SPECIES. A. ALCYON.

BELTED KINGSFISHER.

[Plate XXIII.—Fig. 1.—Female.]

BARTRAM, *p.* 289.—TURTON, *p.* 278.—PEALE'S *Museum*, No. 2145.*

THIS is a general inhabitant of the banks and shores of all our fresh-water rivers from Hudson's bay to Mexico; and is the only species of its tribe found within the United States. This last circumstance, and its characteristic appearance, make it as universally known here, as its elegant little brother, the common Kingsfisher of Europe, is in Britain. Like the love-lorn swains of whom poets tell us, he delights in murmuring streams and falling waters; not however merely that they may sooth his ear, but for a gratification somewhat more substantial. Amidst the roar of the cataract, or over the foam of a torrent, he sits perched upon an overhanging bough, glancing his piercing eye in every direction below for his scaly prey, which with a sudden circular plunge he sweeps from their native element, and swallows in an instant. His voice, which is not unlike the twirling of a watchman's rattle, is naturally loud, harsh, and sudden; but is softened by the sound of the brawling streams and cascades among which he generally rambles. He courses along the windings of the brook or river, at a small height above the surface, sometimes suspending himself by the rapid action of his wings, like certain species of Hawks, ready to pounce on the fry below; now and then settling on an old dead overhanging limb to reconnoitre. Mill-dams are particularly visited by this feathered

* We add the following synonyms:—*Alcedo alcyon*, LINN. *Syst. ed.* 10, vol. 1, 115.—GMEL. *Syst.* 1, 451.—LATH. *Ind. Orn.* 257.—CATESBY, 1, 69.—BUFF. *Pl. Enl.* 593–715.

fisher; and the sound of his pipe is as well known to the miller as the rattling of his own hopper. Rapid streams, with high perpendicular banks, particularly if they be of a hard clayey or sandy nature, are also favourite places of resort for this bird; not only because in such places the small fish are more exposed to view; but because those steep and dry banks are the chosen situations for his nest. Into these he digs with bill and claws, horizontally, sometimes to the extent of four or five feet, at the distance of a foot or two from the surface. The few materials he takes in are not always placed at the extremity of the hole; that he and his mate may have room to turn with convenience. The eggs are five, pure white, and the first brood usually comes out about the beginning of June, and sometimes sooner, according to that part of the country where they reside. On the shores of Kentucky river, near the town of Frankfort, I found the female sitting early in April. They are very tenacious of their haunts, breeding for several successive years in the same hole, and do not readily forsake it, even though it be visited. An intelligent young gentleman informed me, that having found where a Kingsfisher built, he took away its eggs, from time to time, leaving always one behind, until he had taken no less than eighteen from the same nest. At some of these visits, the female being within, retired to the extremity of the hole while he withdrew the egg, and next day, when he returned, he found she had laid again as usual.

The fabulous stories related by the ancients of the nest, manner of hatching, &c. of the Kingsfisher, are too trifling to be repeated here. Over the winds and the waves the humble Kingsfishers of our days, at least the species now before us have no control. Its nest is neither constructed of glue nor fish-bones; but of loose grass and a few feathers. It is not thrown on the surface of the water to float about, with its proprietor, at random; but snugly secured from the winds and the weather in the recesses of the earth; neither is its head or its feathers believed, even by the most illiterate of our clowns or seamen, to be a charm for love, a protection against witchcraft, or a secu-

rity for fair weather. It is neither venerated like those of the Society isles, nor dreaded like those of some other countries; but is considered merely as a bird that feeds on fish; is generally fat; relished by *some* as good eating; and is now and then seen exposed for sale in our markets.

Though the Kingsfisher generally remains with us, in Pennsylvania, until the commencement of cold weather, it is seldom seen here in winter; but returns to us early in April. In North and South Carolina, I observed numbers of these birds in the months of February and March. I also frequently noticed them on the shores of the Ohio, in February, as high up as the mouth of the Muskingum.

I suspect this bird to be a native of the Bahama islands, as well as of our continent. In passing between these isles and the Florida shore, in the month of July, a Kingsfisher flew several times round our ship, and afterwards shot off to the south.

The length of this species is twelve inches and a half, extent twenty; back and whole upper parts a light bluish slate colour; round the neck is a collar of pure white, which reaches before to the chin; head large, crested, the feathers long and narrow, black in the centre, and generally erect; the shafts of all the feathers, except the white plumage, are black; belly and vent white; sides under the wings variegated with blue; round the upper part of the breast passes a band of blue, interspersed with some light brown feathers; before the eye is a small spot of white, and another immediately below it; the bill is three inches long, from the point to the slit of the mouth, strong, sharp pointed, and black, except near the base of the lower mandible, and at the tip, where it is of a horn colour; primaries, and interior webs of the secondaries, black, spotted with white; the interior vanes of the tail feathers elegantly spotted with white on a jet black ground; lower side light coloured; exterior vanes blue; wing-coverts and secondaries marked with small specks of white; legs extremely short; when the bird perches it generally rests on the lower side of the second joint, which is thereby thick and callous; claws stout and black; whole leg of a dirty yellow-

ish colour; above the knee bare of feathers for half an inch; the two exterior toes united together for nearly their whole length.

The female is sprinkled all over with specks of white; the band of blue around the upper part of the breast is nearly half reddish brown; and a little below this passes a band of bright reddish bay, spreading on each side under the wings. The blue and rufous feathers on the breast are strong like scales. The head is also of a much darker blue than the back; and the white feathers on the chin and throat of an exquisite fine glossy texture, like the most beautiful satin.

GENUS 29. CERTHIA. CREEPER.

SPECIES 1. *C. FAMILIARIS*.

BROWN CREEPER.

[Plate VIII.—Fig. 1. Male.]

Little Brown variegated Creeper, BARTRAM, 289.—PEALE'S *Museum*, No. 2434.*

THIS bird agrees so nearly with the common European Creeper (*Certhia familiaris*), that I have little doubt of their being one and the same species. I have examined, at different times, great numbers of these birds, and have endeavoured to make a correct drawing of the male, that Europeans and others may judge for themselves; and the excellent artist to whom the plate was entrusted has done his part so well in the engraving, as to render the figure a perfect resemblance of the living original.

The Brown Creeper is an extremely active and restless little bird. In winter it associates with the small Spotted Woodpecker, Nuthatch, Titmouse, &c. and often follows in their rear, gleaning up those insects which their more powerful bills had alarmed and exposed; for its own slender incurvated bill seems unequal to the task of penetrating into even the decayed wood though it may into holes and behind scales of the bark. Of the Titmouse there are generally present the individuals of a whole family, and seldom more than one or two of the others. As the party advances through the woods, from tree to tree, our little gleaner seems to observe a good deal of regularity in his pro-

* We add the following synonyms:—*Certhia familiaris*, LINN. *Syst. ed.* 10, vol. 1, 118. GMEI. *Syst.* 1, 469—LATH. *Ind. Orn.* 280.—*Le Grimpereau*, BUFF. *Pl. Enl.* 681.

ceedings; for I have almost always observed that he alights on the body near the root of the tree, and directs his course with great nimbleness upwards to the higher branches, sometimes spirally, often in a direct line, moving rapidly and uniformly along, with his tail bent to the tree, and not in the hopping manner of the Woodpecker, whom he far surpasses in dexterity of climbing, running along the lower side of the horizontal branches with surprising ease. If any person be near when he alights, he is sure to keep the opposite side of the tree, moving round as he moves, so as to prevent him from getting more than a transient glimpse of him. The best method of outwitting him, if you are alone, is, as soon as he alights and disappears behind the trunk, take your stand behind an adjoining one, and keep a sharp look out twenty or thirty feet up the body of the tree he is upon, for he generally mounts very regularly to a considerable height, examining the whole way as he advances. In a minute or two, hearing all still, he will make his appearance on one side or other of the tree, and give you an opportunity of observing him.

These birds are distributed over the whole United States; but are most numerous in the western and northern states, and particularly so in the depth of the forests, and in tracts of large timbered woods, where they usually breed; visiting the thicker settled parts of the country in fall and winter. They are more abundant in the flat woods of the lower district of New Jersey than in Pennsylvania; and are frequently found among the pines. Though their customary food appears to consist of those insects of the coleopterous class, yet I have frequently found in their stomachs the seeds of the pine tree, and fragments of a species of fungus that vegetates in old wood, with generally a large proportion of gravel. There seems to be scarcely any difference between the colours and markings of the male and female. In the month of March I opened eleven of these birds, among whom were several females, as appeared by the clusters of minute eggs with which their ovaries were filled, and also several well-marked males, and, on the most careful comparison

of their plumage, I could find little or no difference; the colours indeed were rather more vivid and intense in some than in others; but sometimes this superiority belonged to a male, sometimes to a female and appeared to be entirely owing to difference in age. I found, however, a remarkable and very striking difference in their sizes; some were considerably larger, and had the bill at least one-third longer and stronger than the others, and these I uniformly found to be males. I also received two of these birds from the country bordering on the Cayuga lake, in New York state, from a person who killed them from the tree in which they had their nest. The male of this pair had the bill of the same extraordinary size with several others I had examined before, the plumage in every respect the same. Other males, indeed, were found at the same time of the usual size. Whether this be only an accidental variety, or whether the male, when full grown, be naturally so much larger than the female (as is the case with many birds), and takes several years in arriving at his full size, I cannot positively determine, though I think the latter most probable.

The Brown Creeper builds his nest in the hollow trunk or branch of a tree, where the tree has been shivered, or a limb broken off, or where squirrels or Woodpeckers have wrought out an entrance: for nature has not provided him with the means of excavating one for himself. I have known the female begin to lay by the seventeenth of April. The eggs are usually seven, of a dull cinereous, marked with small dots of reddish yellow, and streaks of dark brown. The young come forth with great caution, creeping about long before they venture on wing. From the early season at which they begin to build, I have no doubts of their raising two broods during summer, as I have seen the old ones entering holes late in July.

The length of this bird is five inches, and nearly seven from the extremity of one wing to that of the other; the upper part of the head is of a deep brownish black; the back brown, and both streaked with white, the plumage of the latter being of a

loose texture, with its filaments not adhering; the white is in the centre of every feather, and is skirted with brown; lower part of the back, rump, and tail-coverts, rusty brown, the last minutely tipped with whitish; the tail is as long as the body, of a light drab colour, with the inner webs dusky, and consists of twelve quills, each sloping off and tapering to a point in the manner of the Woodpeckers, but proportionably weaker in the shafts; in many specimens the tail was very slightly marked with transverse undulating waves of dusky, scarce observable; the two middle feathers the longest, the others on each side shortening by one-sixth of an inch to the outer one; the wing consists of nineteen feathers, the first an inch long, the fourth and fifth the longest, of a deep brownish black, and crossed about its middle with a curving band of rufous white, a quarter of an inch in breadth, marking ten of the quills; below this the quills are exteriorly edged to within a little of their tips with rufous white, and tipped with white; the three secondaries next the body are dusky white on their inner webs, tipped on the exterior margin with white, and above that alternately streaked laterally with black and dull white; the greater and lesser wing coverts are exteriorly tipped with white, the upper part of the exterior edges of the former rufous white; the line over the eye and whole lower parts are white, a little brownish toward the vent, but on the chin and throat pure, silky and glistening; the white curves inwards about the middle of the neck; the bill is half an inch long, slender, compressed sidewise, bending downwards, tapering to a point, dusky above and white below; the nostrils are oblong, half covered with a convex membrane, and without hairs or small feathers; the inside of the mouth is reddish; the tongue tapering gradually to a point, and horny towards the tip; the eye is dark hazel; the legs and feet a dirty clay colour; the toes placed three before and one behind, the two outer ones connected with the middle one to the first joint; the claws rather paler, large, almost semi-circular, and extremely sharp pointed; the hind claw the largest. The figure in

the plate represents a male of the usual size in its exact proportions, and, but for the satisfaction of foreigners, might have rendered the whole of this prolix description unnecessary.

SPECIES 2. *CERTHIA MACULATA*.*

BLACK AND WHITE CREEPER.

[Plate XIX.—Fig. 3.]

EDWARDS, pl. 300.—*White poll Warbler*, *Arct. Zool.* 402. No. 293.—*Le figuier varié*, *BUFF.* v, 305.—*LATH.* II, 488.—*TURTON*, I, p. 603.—*PEALE'S Museum*, No. 7092.

THIS nimble and expert little species seldom perches on the small twigs; but circumambulates the trunk, and larger branches, in quest of ants and other insects, with admirable dexterity. It arrives in Pennsylvania, from the south, about the twentieth of April, the young begin to fly early in July; and the whole tribe abandon the country about the beginning of October. Sloane describes this bird as an inhabitant of the West India islands, where it probably winters. It was first figured by Edwards from a dried skin sent him by Mr. William Bartram, who gave it its present name. Succeeding naturalists have classed it with the warblers; a mistake which I have endeavoured to rectify.

The genus of Creepers comprehends about thirty different species, many of which are richly adorned with gorgeous plumage; but, like their congenial tribe the Woodpeckers, few of them excel in song; their tongues seem better calculated for extracting noxious insects from the bark of trees, than for trilling out sprightly airs; as the hardened hands of the husbandman are better suited for clearing the forest or guiding the plough, than dancing among the keys of a forte-piano. Which of the two is the most honourable and useful employment is not difficult to determine. Let the farmer, therefore, respect this little bird for its useful qualities, in clearing his fruit and forest

* Linnæus placed this bird in his genus *Molacilla*, and Latham arranged it in *Sylvia*. It does not belong to the genus *Certhia* as at present restricted.

trees from destructive insects; though it cannot serenade him with its song.

The length of this species is five inches and a half, extent seven and a half; crown white, bordered on each side with a band of black, which is again bounded by a line of white passing over each eye, below this is a large spot of black covering the ear feathers; chin and throat black; wings the same, crossed transversely by two bars of white; breast and back streaked with black and white; tail, upper and also under coverts, black, edged and bordered with white; belly white; legs and feet dirty yellow; hind claw the longest, and all very sharp pointed; bill a little compressed sidewise, slightly curved, black above, paler below; tongue long, fine-pointed, and horny at the extremity. These last circumstances, joined to its manners, characterize it, decisively, as a Creeper.

The female and young birds of the first year want the black on the throat, having that part of a grayish white.

SPECIES 3. *CERTHIA CAROLINIANA*.*

GREAT CAROLINA WREN.

[Plate XII.—Fig. 5.]

Le Roitelet de la Louisiana, Pl. Enl. 730, fig. 1.—LATH. Syn. VII, p. 507, var. B.—*Le Troglodytes de la Louisiana*, BUFF. Ois. v, p. 361.—*Motacilla Caroliniana* (*regulus magnus*,) BARTRAM, p. 291.—PEALE'S *Museum*, No. 7248.†

THIS is another of those equivocal species that so often occur to puzzle the naturalist. The general appearance of this bird is such, that the most illiterate would at first sight call it a *Wren*; but the common *Wren* of Europe, and the *Winter Wren* of the United States, are both warblers, judging them according to the simple principle of Linnæus. The present species, however, and the following (the *Marsh Wren*,) though possessing great family likeness to those above mentioned, are decisively *Creepers*, if the bill, the tongue, nostrils and claws are to be the criteria by which we are to class them.

The colour of the plumage of birds is but an uncertain and inconstant guide; and though in some cases it serves to furnish a trivial or specific appellation, yet can never lead us to the generic one. I have, therefore, notwithstanding the general appearance of these birds, and the practice of former ornithologists, removed them to the genus *Certhia*, from that of *Motacilla*, where they have hitherto been placed.

This bird is frequently seen, early in May, along the shores of the Delaware, and other streams that fall into it on both sides,

* This and the two following species were placed by Latham in the genus *Sylvia*, whence they have been removed by Wilson, without apparently, sufficient reason.

† We add the following synonymes:—*Motacilla troglodytes*, var. γ GMEL. vol. I, p. 994.—*Sylvia ludoviciana*, LATH. Index Orn. sp. 150.

thirty or forty miles below Philadelphia; but is rather rare in Pennsylvania. This circumstance is a little extraordinary; since, from its size, and stout make, it would seem more capable of braving the rigors of a northern climate than any of the others. It can, however, scarcely be called migratory. In the depth of winter I found it numerous in Virginia along the shores and banks of the James river and its tributary streams, and thence as far south as Savannah. I also observed it on the banks of the Ogeechee; it seemed to be particularly attached to the borders of cypress swamps, deep hollows, among piles of old decaying timber, and by rivers and small creeks. It has all the restless jerking manners of the Wrens, skipping about with great nimbleness, hopping into caves, and disappearing into holes and crevices like a rat, for several minutes, and then reappearing in another quarter. It occasionally utters a loud, strong, and singular twitter, resembling the word *chirr-rup*, dwelling long and strongly on the first syllable; and so loud that I at first mistook it for the Red-bird, *L. cardinalis*. It has also another chant, rather more musical, like "*Sweet William, Sweet William,*" much softer than the former. Though I cannot positively say, from my own observations, that it builds in Pennsylvania, and have never yet been so fortunate as to find its nest; yet, from the circumstance of having several times observed it within a quarter of a mile of the Schuylkill, in the month of August, I have no doubt that some few breed here, and think it highly probable that Pennsylvania and New York may be the northern boundaries of their visits, having sought for it in vain among the states of New England. Its food appears to consist of those insects and their larvæ that frequent low damp caves, piles of dead timber, old roots, projecting banks of creeks, &c. &c. It certainly possesses the faculty of seeing in the dark better than day birds usually do; for I have observed it exploring the recesses of caves, where a good acute eye must have been necessary to enable it to distinguish its prey.

In the southern states, as well as in Louisiana, this species is generally *resident*; though in summer they are more numer-

ous, and are found rather farther north than in winter. In this last season their chirruping is frequently heard in gardens soon after day-break, and along the borders of the great rivers of the southern states, not far from the sea coast.

The Great Wren of Carolina is five inches and a quarter long, and seven broad; the whole upper parts are reddish brown, the wings and tail being barred with black; a streak of yellowish white runs from the nostril over the eye, down the side of the neck, nearly to the back; below that a streak of reddish brown extends from the posterior part of the eye to the shoulder; the chin is yellowish white; the breast, sides and belly a light rust colour, or reddish buff; vent feathers white, neatly barred with black; in the female plain; wing coverts minutely tipped with white; legs and feet flesh coloured, and very strong; bill three-quarters of an inch long, strong, a little bent, grooved and pointed, the upper mandible bluish black, lower light blue; nostrils oval, partly covered with a prominent convex membrane; tongue pointed and slender; eyes hazel; tail cuneiform, the two exterior feathers on each side three quarters of an inch shorter, whitish on their exterior edges, and touched with deeper black; the same may be said of the three outer primaries. The female wants the white on the wing coverts; but differs little in colour from the male.

In this species I have observed a circumstance common to the House and Winter Wren, but which is not found in the Marsh Wren; the feathers of the lower part of the back, when parted by the hand, or breath, appear spotted with white, being at bottom deep ash, reddish brown at the surface, and each feather with a spot of white between these two colours. This, however, cannot be perceived without parting the feathers.

SPECIES 4. CERTHIA PALUSTRIS.

MARSH WREN.

[Plate XII.—Fig. 4.]

Motacilla palustris (regulus minor), BARTRAM, p. 291.—PEALE'S
Museum, No. 7282.

THIS obscure but spirited little species has been almost overlooked by the naturalists of Europe, as well as by those of its own country. The singular attitude in which it is represented will be recognized by those acquainted with its manners, as one of its most common and favourite ones, while skipping through among the reeds and rushes. The Marsh Wren arrives in Pennsylvania about the middle of May, or as soon as the reeds and a species of *Nymphaea*, usually called splatter-docks, which grow in great luxuriance along the tide water of our rivers, are sufficiently high to shelter it. To such places it almost wholly limits its excursions, seldom venturing far from the river. Its food consists of flying insects, and their larvæ, and a species of green grasshoppers that inhabit the reeds. As to its notes it would be mere burlesque to call them by the name of song. Standing on the reedy borders of the Schuylkill or Delaware, in the month of June, you hear a low crackling sound, something similar to that produced by air bubbles forcing their way through mud or boggy ground when trod upon; this is the *song* of the Marsh Wren. But as among the human race it is not given to one man to excel in every thing, and yet each, perhaps, has something peculiarly his own; so among birds we find a like distribution of talents and peculiarities. The little bird now before us, if deficient and contemptible in singing, excels in the art of *design*, and constructs a nest, which, in durability, warmth and convenience, is scarcely inferior to one, and far

superior to many, of its more musical brethren. This is formed outwardly of wet rushes mixed with mud, well intertwined, and fashioned into the form of a cocoa nut. A small hole is left two-thirds up, for entrance, the upper edge of which projects like a pent house over the lower, to prevent the admission of rain. The inside is lined with fine soft grass, and sometimes feathers; and the outside, when hardened by the sun, resists every kind of weather. This nest is generally suspended among the reeds, above the reach of the highest tides, and is tied so fast in every part to the surrounding reeds, as to bid defiance to the winds and the waves. The eggs are usually six, of a dark fawn colour, and very small. The young leave the nest about the twentieth of June, and they generally have a second brood in the same season.

The size, general colour, and habit of this bird of erecting its tail, gives it, to a superficial observer, something of the appearance of the common House Wren, represented in Plate VIII of this work; and still more that of the Winter Wren, figured in the same plate; but with the former of these it never associates; and the latter has left us some time before the Marsh Wren makes his appearance. About the middle of August they begin to go off, and on the first of September very few of them are to be seen. How far north the migrations of this species extend I am unable to say; none of them to my knowledge winter in Georgia, or any of the southern states.

The Marsh Wren is five inches long, and six in extent; the whole upper parts are dark brown, except the upper part of the head, back of the neck, and middle of the back, which are black, the two last streaked with white; the tail is short, rounded, and barred with black; wings slightly barred; a broad strip of white passes over the eye half way down the neck; the sides of the neck are also mottled with touches of a light clay colour on a whitish ground; whole under parts pure silvery white, except the vent, which is tinged with brown; the legs are light brown; the hind claw large, semicircular, and very sharp; bill slender, slightly bent; nostrils prominent; tongue narrow, very tapering,

sharp pointed, and horny at the extremity; eye hazel. The female almost exactly resembles the male in plumage.

From the above description, and a view of the figure, the naturalist will perceive that this species is truly a *Certhia* or Creeper; and indeed its habits confirm this, as it is continually climbing along the stalks of reeds and other aquatic plants, in search of insects.

GENUS 30. TROCHILUS. HUMMING-BIRD.

SPECIES. *T. COLUBRIS*.

HUMMING-BIRD.

[Plate X.—Figs. 3 and 4.]

Trochilus colubris. LINN. *Syst.* I, p. 191, No. 12.—*Oiseau mouche à gorge rouge de la Caroline*, BRISS. *Orn.* III, p. 716, No. 13, t. 36, fig. 6.—*Le Rubis*, BUFF. *Ois.* VI, p. 13.—*Humming-Bird*, CATESB. *Car.* I, 65.—*Red-throated Humming-bird*, EDW. I, 38, male and female.—LATH. *Syn.* II, 769, No. 35.—PEALE'S *Museum*, No. 2520.

NATURE in every department of her works seems to delight in variety; and the present subject of our history is almost as singular for its minuteness, beauty, want of song and manner of feeding, as the Mocking-bird is for unrivalled excellence of notes, and plainness of plumage. Though this interesting and beautiful genus of birds comprehends upwards of seventy species, all of which, with a very few exceptions, are natives of America and its adjacent islands, it is yet singular, that the species now before us should be the only one of its tribe that ever visits the territory of the United States.

According to the observations of my friend Mr. Abbot, of Savannah, in Georgia, who has been engaged these thirty years in collecting and drawing subjects of natural history in that part of the country, the Humming-bird makes its first appearance there, from the south, about the twenty-third of March; two weeks earlier than it does in the county of Burke, sixty miles higher up the country towards the interior; and at least five weeks sooner than it reaches this part of Pennsylvania. As it passes on to the northward as far as the interior of Canada, where

it is seen in great numbers,* the wonder is excited how so feebly constructed and delicate a little creature can make its way over such extensive regions of lakes and forests, among so many enemies, all its superiors in strength and magnitude. But its very *minuteness*, the rapidity of its flight, which almost eludes the eye, and that admirable instinct, reason, or whatever else it may be called, and daring courage which heaven has implanted in its bosom, are its guides and protectors. In these we may also perceive the reason, why an all-wise Providence has made this little hero an exception to a rule which prevails almost universally through nature, *viz.* that the smallest species of a tribe are the most prolific. The Eagle lays one, sometimes two, eggs; the Crow five; the Titmouse seven or eight; the small European Wren fifteen; the Humming-bird *two*: and yet this latter is abundantly more numerous in America than the Wren is in Europe.

About the twenty-fifth of April the Humming-bird usually arrives in Pennsylvania; and about the tenth of May begins to build its nest. This is generally fixed on the upper side of a horizontal branch, not among the twigs, but on the body of the branch itself. Yet I have known instances where it was attached by the side to an old moss-grown trunk; and others where it was fastened on a strong rank stalk, or weed, in the garden; but these cases are rare. In the woods it very often chooses a white oak sapling to build on; and in the orchard, or garden, selects a pear tree for that purpose. The branch is seldom more than ten feet from the ground. The nest is about an inch in diameter, and as much in depth. A very complete one is now lying before me, and the materials of which it is composed are as follow:—The outward coat is formed of small pieces of a species of bluish gray lichen that vegetates on old trees and fences, thickly glued on with the saliva of the bird, giving firmness and consistency to the whole, as well as keeping out

* Mr. M'Kenzie speaks of seeing a "beautiful Humming-bird" near the head of the Unjigah or Peace river, in lat. 54°; but has not particularized the species.

moisture. Within this are thick matted layers of the fine wings of certain flying seeds, closely laid together; and, lastly, the downy substance from the great mullein, and from the stalks of the common fern, lines the whole. The base of the nest is continued round the stem of the branch, to which it closely adheres; and, when viewed from below, appears a mere mossy knot or accidental protuberance. The eggs are two, pure white, and of equal thickness at both ends. The nest and eggs in the plate were copied with great precision, and by actual measurement, from one just taken in from the woods. On a person's approaching their nest, the little proprietors dart around with a humming sound, passing frequently within a few inches of one's head; and should the young be newly hatched, the female will resume her place on the nest even while you stand within a yard or two of the spot. The precise period of incubation I am unable to give; but the young are in the habit, a short time before they leave the nest, of thrusting their bills into the mouths of their parents, and sucking what they have brought them. I never could perceive that they carried them any animal food; though, from circumstances that will presently be mentioned, I think it highly probable they do. As I have found their nests with eggs so late as the twelfth of July, I do not doubt but that they frequently, and perhaps usually, raise two brood in the same season.

The humming-bird is extremely fond of tubular flowers, and I have often stopt, with pleasure, to observe his manœuvres among the blossoms of the trumpet flower. When arrived before a thicket of these that are full blown, he poises, or suspends himself on wing, for the space of two or three seconds, so steadily, that his wings become invisible, or only like a mist; and you can plainly distinguish the pupil of his eye looking round with great quickness and circumspection; the glossy golden green of his back, and the fire of his throat, dazzling in the sun, form altogether a most interesting appearance. The position into which his body is usually thrown while in the act of thrusting his slender tubular tongue into the flower, to extract its sweets, is exhibited in the figure on the plate. When he alights, which is

frequently, he always prefers the small dead twigs of a tree, or bush, where he dresses and arranges his plumage with great dexterity. His only note is a single chirp, not louder than that of a small cricket or grasshopper, generally uttered while passing from flower to flower, or when engaged in fight with his fellows; for when two males meet at the same bush, or flower, a battle instantly takes place; and the combatants ascend in the air, chirping, darting and circling around each other, till the eye is no longer able to follow them. The conqueror, however, generally returns to the place, to reap the fruits of his victory. I have seen him attack, and for a few moments tease the King-bird; and have also seen him, in his turn, assaulted by a humble-bee, which he soon put to flight. He is one of those few birds that are universally beloved; and amidst the sweet dewy serenity of a summer's morning, his appearance among the arbours of honeysuckles, and beds of flowers, is truly interesting.

When morning dawns, and the blest sun, again
Lifts his red glories from the Eastern main,
Then through our woodbines, wet with glittering dews,
The flower-fed Humming-bird his round pursues;
Sips with inserted tube, the honeyed blooms,
And chirps his gratitude as round he roams;
While richest roses, though in crimson drest,
Shrink from the splendour of his gorgeous breast;
What heav'nly tints in mingling radiance fly!
Each rapid movement gives a different dye;
Like scales of burnish'd gold they dazzling show,
Now sink to shade—now like a furnace glow!

The singularity of this little bird has induced many persons to attempt to raise them from the nest, and accustom them to the cage. Mr. Coffer, of Fairfax county, Virginia, a gentleman who has paid great attention to the manners and peculiarities of our native birds, told me, that he raised and kept two, for some months, in a cage; supplying them with honey dissolved in water, on which they readily fed. As the sweetness of the liquid frequently brought small flies and gnats about the cage,

and cup, the birds amused themselves by snapping at them on wing, and swallowing them with eagerness, so that these insects formed no inconsiderable part of their food. Mr. Charles Wilson Peale, proprietor of the Museum, tells me, that he had two young Humming-birds which he raised from the nest. They used to fly about the room; and would frequently perch on Mrs. Peale's shoulder to be fed. When the sun shone strongly into the chamber, he has observed them darting after the motes that floated in the light, as Flycatchers would after flies. In the summer of 1803 a nest of young Humming-birds was brought me, that were nearly fit to fly. One of them actually flew out by the window the same evening, and falling against a wall, was killed. The other refused food, and the next morning I could but just perceive that it had life. A lady in the house undertook to be its nurse, placed it in her bosom, and as it began to revive, dissolved a little sugar in her mouth, into which she trust its bill, and it sucked with great avidity. In this manner it was brought up until fit for the cage. I kept it upwards of three months, supplied it with loaf sugar dissolved in water, which it preferred to honey and water, gave it fresh flowers every morning sprinkled with the liquid, and surrounded the space in which I kept it with gauze, that it might not injure itself. It appeared gay, active, and full of spirit, hovering from flower to flower as if in its native wilds, and always expressed by its motions and chirping, great pleasure at seeing fresh flowers introduced to its cage. Numbers of people visited it from motives of curiosity, and I took every precaution to preserve it, if possible, through the winter. Unfortunately, however, by some means it got at large, and, flying about the room, so injured itself that it soon after died.

This little bird is extremely susceptible of cold, and if long deprived of the animating influence of the sun beams, droops and soon dies. A very beautiful male was brought me this season, which I put into a wire cage, and placed in a retired shaded part of the room. After fluttering about for some time, the weather being uncommonly cool, it clung by the wires, and

hung in a seemingly torpid state for a whole forenoon. No motion whatever of the lungs could be perceived, on the closest inspection, though at other times this is remarkably observable; the eyes were shut; and when touched by the finger it gave no signs of life or motion. I carried it out to the open air, and placed it directly in the rays of the sun, in a sheltered situation. In a few seconds respiration became very apparent; the bird breathed faster and faster, opened its eyes, and began to look about, with as much seeming vivacity as ever. After it had completely recovered, I restored it to liberty; and it flew off to the withered top of a pear tree, where it sat for some time dressing its disordered plumage, and then shot off like a meteor.

The flight of the Humming-bird from flower to flower, greatly resembles that of a bee, but is so much more rapid, that the latter appears a mere loiterer to him. He poises himself on wing, while he thrusts his long slender tubular tongue into the flowers in search of food. He sometimes enters a room by the window, examines the bouquets of flowers, and passes out by the opposite door or window. He has been known to take refuge in a hot-house during the cool nights of autumn; to go regularly out in the morning, and to return as regularly in the evening, for several days together.

The Humming-bird has, hitherto, been supposed to subsist altogether on the honey, or liquid sweets, which it extracts from flowers. One or two curious observers have indeed remarked, that they have found evident fragments of insects in the stomach of this species; but these have been generally believed to have been taken in by accident. The few opportunities which Europeans have to determine this point by observations made on the living bird, or by dissection of the newly-killed one, have rendered this mistaken opinion almost general in Europe. For myself I can speak decisively on this subject. I have seen the Humming-bird for half an hour at a time darting at those little groups of insects that dance in the air in a fine summer evening, retiring to an adjoining twig to rest, and renewing the attack

with a dexterity that sets all our other Flycatchers at defiance. I have opened from time to time great numbers of these birds; have examined the contents of the stomach with suitable glasses, and in three cases out of four, have found these to consist of broken fragments of insects. In many subjects entire insects of the coleopterous class, but very small, were found unbroken. The observations of Mr. Coffey as detailed above, and the remarks of my worthy friend Mr. Peale, are corroborative of these facts. It is well known that the Humming-bird is particularly fond of tubular flowers where numerous small insects of this kind resort to feed on the farina, &c. and there is every reason for believing that he is as often in search of these insects as of honey; and that the former compose at least as great a portion of his usual sustenance as the latter. If this food be so necessary for the parents there is no doubt but the young also occasionally partake of it.

To enumerate all the flowers of which this little bird is fond, would be to repeat the names of half our American Flora. From the blossoms of the towering poplar, or tulip tree, through a thousand intermediate flowers to those of the humble larkspur, he ranges at will, and almost incessantly. Every period of the season produces a fresh multitude of new favourites. Towards the month of September there is a yellow flower which grows in great luxuriance along the sides of creeks and rivers, and in low moist situations; it grows to the height of two or three feet, and the flower which is about the size of a thimble, hangs in the shape of a cap of liberty above a luxuriant growth of green leaves. It is the *Balsamina noli me tangere* of botanists, and is the greatest favourite with the Humming-bird of all our other flowers. In some places where these plants abound you may see at one time ten or twelve Humming-birds darting about, and fighting with and pursuing each other. About the twentieth of September they generally retire to the south. I have, indeed, sometimes seen a solitary individual on the twenty-eighth and thirtieth of that month, and sometimes even in October; but

these case are rare. About the beginning of November they pass the southern boundary of the United States into Florida.

The Humming-bird is three inches and a half in length, and four and a quarter in extent; the whole back, upper part of the neck, sides under the wings, tail coverts, and two middle feathers of the tail, are of a rich golden green; the tail is forked, and, as well as the wings, of a deep brownish purple; the bill and eyes are black; the legs and feet, both of which are extremely small, are also black; the bill is straight, very slender, a little inflated at the tip, and very incompetent to the exploit of penetrating the tough sinewy side of a crow, and precipitating it from the clouds to the earth, as Charlevoix would persuade his readers to believe.* The nostrils are two small oblong slits, situated at the base of the upper mandible, scarcely perceivable when the bird is dead, though very distinguishable and prominent when living; the sides of the belly and belly itself dusky white, mixed with green; but what constitutes the chief ornament of this little bird, is the splendour of the feathers of his throat, which when placed in a proper position, glow with all the brilliancy of the ruby. These feathers are of singular strength and texture, lying close together like scales, and vary when moved before the eye from a deep black to a fiery crimson and burning orange. The female is destitute of this ornament; but differs little in other appearance from the male; her tail is tipped with white, and the whole lower parts are of the same tint. The young birds of the first season, both male and female, have the tail tipped with white, and the whole lower parts nearly white; in the month of September the ornamental feathers on the throat of the young males begin to appear.

On dissection the heart was found to be remarkably large, nearly as big as the cranium; and the stomach, though distended with food, uncommonly small, not exceeding the globe of the eye, and scarcely more than one-sixth part as large as the heart; the fibres of the last were also exceedingly strong. The

* Hist. de la Nov. France, III, p. 185.

brain was in large quantity, and very thin; the tongue, from the tip to an extent equal with the length of the bill, was perforated, forming two closely attached parallel and cylindrical tubes; the other extremities of the tongue corresponded exactly to those of the Woodpecker, passing up the hind head, and reaching to the base of the upper mandible. These observations were verified in five different subjects, all of whose stomachs contained fragments of insects, and some of them whole ones.

ORDER III. PASSERES. PASSERINE.

GENUS 31. STURNUS. STARLING.

SPECIES. *S. PREDATORIUS*.

RED-WINGED STARLING.

[Plate XXX.—Fig. 1, *Male*.—Fig. 2, *Female*.]

Oriolus phæniceus, LINN. *Syst.* 161.—*Red-winged Oriole*, *Arct. Zool.* 255, No. 140.—*Icterus pterophænicieus*, BRISS. II, 97.—*Le Commandeur*, BUFF. III, 214. *Pl. Enl.* 402.—LATH. I, 428.—*Acolchichi*, FERNAND. *Nov. Hisp.* p. 14. *Red-winged Starling*, CATESB. p. 13.—PEALE'S *Museum*, No. 1466, 1467.

THIS notorious and celebrated *corn-thief*, the long reputed plunderer and pest of our honest and laborious farmers, now presents himself before us, with his copartner in iniquity,* to receive the character due for their very active and distinguished services. In investigating the nature of these, I shall endeavour to render strict historical justice to this noted pair; adhering to the honest injunctions of the poet,

“Nothing extenuate,

“Nor set down aught in malice.”

Let the reader divest himself equally of prejudice, and we shall be at no loss to ascertain accurately their true character.

The Red-winged Starlings, though generally migratory in the states north of Maryland, are found during winter in immense flocks, sometimes associated with the Purple Grakles, and often by themselves, along the whole lower parts of Virginia, both Carolinas, Georgia and Louisiana, particularly near the sea-coast, and in the vicinity of large rice and corn fields. In the

* Wilson here alludes to the Pileated Woodpecker, which in the original edition precedes the Red-winged Starling.

months of January and February, while passing through the former of these countries, I was frequently entertained with the aerial evolutions of those great bodies of Starlings. Sometimes they appeared driving about like an enormous black cloud carried before the wind, varying its shape every moment. Sometimes suddenly rising from the fields around me with a noise like thunder; while the glittering of innumerable wings of the brightest vermilion amid the black cloud they formed, produced on these occasions a very striking and splendid effect. Then descending like a torrent, and covering the branches of some detached grove, or clump of trees, the whole congregated multitude commenced one general concert or chorus, that I have plainly distinguished at the distance of more than two miles, and when listened to at the intermediate space of about a quarter of a mile, with a slight breeze of wind to swell and soften the flow of its cadences, was to me grand and even sublime. The whole season of winter, that with most birds is past in struggling to sustain life, in silent melancholy, is with the Red-wings one continued carnival. The profuse gleanings of the old rice, corn and buckwheat fields, supply them with abundant food, at once ready and nutritious; and the intermediate time is spent either in aerial manœuvres, or in grand vocal performances, as if solicitous to supply the absence of all the tuneful summer tribes, and to cheer the dejected face of nature with their whole combined powers of harmony.

About the twentieth of March, or earlier if the season be open, they begin to enter Pennsylvania in numerous though small parties. These migrating flocks are usually observed from day-break to eight or nine in the morning, passing to the north, chattering to each other as they fly along; and, in spite of all our antipathy, their well known notes and appearance, after the long and dreary solitude of winter, inspire cheerful and pleasing ideas of returning spring warmth and verdure. Selecting their old haunts, every meadow is soon enlivened by their presence. They continue in small parties to frequent the low borders of creeks, swamps and ponds, till about the middle of April, when they separate in pairs to breed; and about the

last week in April, or first in May, begin to construct their nest. The place chosen for this is generally within the precincts of a marsh or swamp, meadow or other like watery situation. The spot usually a thicket of alder bushes, at the height of six or seven feet from the ground; sometimes in a detached bush in a meadow of high grass; often in a tussock of rushes or coarse rank grass; and not unfrequently in the ground. In all of which situations I have repeatedly found them. When in a bush they are generally composed outwardly of wet rushes picked from the swamp, and long tough grass in large quantity, and well lined with very fine bent. The rushes, forming the exterior, are generally extended to several of the adjoining twigs, round which they are repeatedly and securely twisted; a precaution absolutely necessary for its preservation, on account of the flexible nature of the bushes in which it is placed. The same caution is observed when a tussock is chosen, by fastening the tops together, and intertwining the materials of which the nest is formed with the stalks of rushes around. When placed in the ground, less care and fewer materials being necessary, the nest is much simpler and slighter than before. The female lays five eggs, of a very pale light blue, marked with faint tinges of light purple and long straggling lines and dashes of black. It is not uncommon to find several nests in the same thicket, within a few feet of each other.

During the time the female is sitting, and still more particularly after the young are hatched, the male, like most other birds that build in low situations, exhibits the most violent symptoms of apprehension and alarm on the approach of any person to its near neighbourhood. Like the Lapwing of Europe he flies to meet the intruder, hovers at a short height over head, uttering loud notes of distress; and while in this situation displays to great advantage the rich glowing scarlet of his wings, heightened by the jetty black of his general plumage. As the danger increases, his cries become more shrill and incessant, and his motions rapid and restless; the whole meadow is alarmed, and a collected crowd of his fellows hover around, and mingle their notes of alarm and agitation with his. When the young are

taken away, or destroyed, he continues for several days near the place, restless and dejected, and generally recommences building soon after, in the same meadow. Towards the beginning or middle of August, the young birds begin to fly in flocks, and at that age nearly resemble the female, with the exception of some reddish or orange, that marks the shoulders of the males, and which increases in space and brilliancy as winter approaches. It has been frequently remarked that at this time the young birds chiefly associate by themselves, there being sometimes not more than two or three old males observed in a flock of many thousands. These, from the superior blackness and rich red of their plumage, are very conspicuous.

Before the beginning of September these flocks have become numerous and formidable, and the young ears of maize, or Indian corn being then in their soft, succulent, milky state, present a temptation that cannot be resisted. Reinforced by numerous and daily flocks from all parts of the interior, they pour down on the low countries in prodigious multitudes. Here they are seen, like vast clouds, wheeling and driving over the meadows and devoted corn fields, darkening the air with their numbers. Then commences the work of destruction on the corn, the husks of which, though composed of numerous envelopments of closely wrapt leaves, are soon completely or partially torn off; while from all quarters myriads continue to pour down like a tempest, blackening half an acre at a time; and, if not disturbed, repeat their depredations till little remains but the cob and the shrivelled skins of the grain; what little is left of the tender ear being exposed to the rains and weather is generally much injured. All the attacks and havock made at this time among them with the gun, and by the Hawks, several species of which are their constant attendants, has little effect on the remainder. When the Hawks make a sweep among them they suddenly open on all sides, but rarely in time to disappoint them of their victims; and though repeatedly fired at, with mortal effect, they only remove from one field to an adjoining one, or to another quarter of the same inclosure. From dawn to nearly sun-set, this open and daring devastation is carried on,

under the eye of the proprietor; and a farmer who has any considerable extent of corn would require half a dozen men at least with guns to guard it; and even then, all their vigilance and activity would not prevent a good tithe of it from becoming the prey of the Black-birds. The Indians, who usually plant their corn in one general field, keep the whole young boys of the village, all day patrolling round and among it; and each being furnished with bow and arrows, with which they are very expert, they generally contrive to destroy great numbers of them.

It must however, be observed, that this scene of pillage is principally carried on in the low countries, not far from the sea-coast, or near the extensive flats that border our large rivers; and is also chiefly confined to the months of August and September. After this period the corn having acquired its hard shelly coat, and the seeds of the reeds or wild oats, with a profusion of other plants that abound along the river shores, being now ripe, and in great abundance, present a new and more extensive field for these marauding multitudes. The reeds also supply them with convenient roosting places, being often in almost unapproachable morasses; and thither they repair every evening from all quarters of the country. In some places, however, when the reeds become dry, advantage is taken of this circumstance to destroy these birds by a party secretly approaching the place under cover of a dark night, setting fire to the reeds in several places at once, which being soon enveloped in one general flame the uproar among the Blackbirds becomes universal, and by the light of the conflagration they are shot down in vast numbers; while hovering and screaming over the place. Sometimes straw is used for the same purpose, being previously strewed near the reeds and alder bushes where they are known to roost, which being instantly set on fire, the consternation and havock is prodigious; and the party return by day to pick up the slaughtered game. About the first of November they begin to move off towards the south; though near the sea coast, in the

states of New Jersey and Delaware, they continue long after that period.

Such are the general manners and character of the *Red-winged Starling*; but there remain some facts to be mentioned, no less authentic, and well deserving the consideration of its enemies more especially of those whose detestation of this species would stop at nothing short of total extirpation.

It has been already stated that they arrive in Pennsylvania late in March. Their general food at this season, as well as during the early part of summer, (for the Crows and Purple Grakles are the principal pests in planting time,) consists of grub-worms, caterpillars, and various other larvæ, the silent but deadly enemies of all vegetation, and whose secret and insidious attacks are more to be dreaded by the husbandman than the combined forces of the whole feathered tribes together. For these vermin the Starlings search with great diligence; in the ground, at the roots of plants, in orchards, and meadows, as well as among buds, leaves and blossoms; and from their known voracity the multitudes of these insects which they destroy must be immense. Let me illustrate this by a short computation. If we suppose each bird, on an average, to devour fifty of these larvæ in a day, (a very moderate allowance,) a single pair in four months, the usual time such food is sought after, will consume upwards of twelve thousand. It is believed, that not less than a million pair of these birds are distributed over the whole extent of the United States in summer; whose food being nearly the same, would swell the amount of vermin destroyed to twelve thousand millions. But the number of young birds may be fairly estimated at double that of their parents, and as these are constantly fed on larvæ for at least three weeks, making only the same allowance for them as for the old ones, their share would amount to four thousand two hundred millions; making a grand total of sixteen thousand two hundred millions of noxious insects destroyed in the space of four months by this single species! The combined ravages of such a hideous host of vermin would be sufficient to spread famine and desolation over a wide

extent of the richest and best cultivated country on earth. All this, it may be said, is mere supposition. It is, however, supposition founded on known and acknowledged facts. I have never dissected any of these birds in spring without receiving the most striking and satisfactory proofs of those facts; and though in a matter of this kind it is impossible to ascertain precisely the amount of the benefits derived by agriculture from this and many other species of our birds; yet in the present case I cannot resist the belief, that the services of this species, in spring, are far more important and beneficial than the value of all that portion of corn which a careful and active farmer permits himself to lose by it.

The great range of country frequented by this bird extends from Mexico on the south, to Labrador. Our late enterprising travellers across the continent to the Pacific ocean observed it numerous in several of the vallies at a great distance up the Missouri. When taken alive, or reared from the nest, it soon becomes familiar, sings frequently, bristling out its feathers something in the manner of the Cow Bunting. These notes, though not remarkably various, are very peculiar. The most common one resembles the syllables *conk-quer ree*; others the shrill sounds produced by filing a saw; some are more guttural; and others remarkably clear. The usual note of both male and female is a single *chuck*. Instances have been produced where they have been taught to articulate several words distinctly; and contrary to that of many birds the male loses little of the brilliancy of his plumage by confinement.

A very remarkable trait of this bird is the great difference of size between the male and female; the former being nearly two inches longer than the latter, and of proportionate magnitude. They are known by various names in the different states of the union; such as the *Swamp Blackbird*, *Marsh Blackbird*, *Red-winged Blackbird*, *Corn or Maize thief*, *Starling*, &c. Many of them have been carried from this to different parts of Europe, and Edwards relates that one of them, which had no doubt escaped from a cage, was shot in the neighborhood of

London; and on being opened, its stomach was found to be filled with grub worms, caterpillars and beetles; which Buffon seems to wonder at, as "in their own country," he observes, "they feed exclusively on grain and maize."

Hitherto this species has been generally classed by naturalists with the Orioles. By a careful comparison, however, of its bill with those of that tribe, the similarity is by no means sufficient to justify this arrangement; and its manners are altogether different. I can find no genus to which it makes so near an approach, both in the structure of the bill and in food, flight and manners as those of the *Stare*, with which, following my judicious friend Mr. Bartram, I have accordingly placed it. To the European the perusal of the foregoing pages will be sufficient to satisfy him of their similarity of manners. For the satisfaction of those who are unacquainted with the common Starling of Europe, I shall select a few sketches of its character, from the latest and most accurate publication I have seen from that quarter.* Speaking of the *Stare* or Starling, this writer observes "In the winter season these birds fly in vast flocks, and may be known at a great distance by their whirling mode of flight, which Buffon compares to a sort of vortex, in which the collective body performs a uniform circular revolution, and at the same time continues to make a progressive advance. The evening is the time when the *Stares* assemble in the greatest numbers, and betake themselves to the fens and marshes, where they roost among the reeds: they chatter much in the evening and morning, both when they assemble and disperse. So attached are they to society that they not only join those of their own species, but also birds of a different kind; and are frequently seen in company with Red-wings, [a species of Thrush,] Fieldfares; and even with Crows, Jackdaws and Pigeons. Their principal food consists of worms, snails and caterpillars; they likewise eat various kinds of grain, seeds and berries." He adds, that "in a confined state they are very docile, and may easily be

* Bewick's British Birds, part i, p. 119, Newcastle, 1809.

taught to repeat short phrases, or whistle tunes with great exactness."

The *Red-winged Starling*, fig. 1, is nine inches long, and fourteen inches in extent; the general colour is a glossy black, with the exception of the whole lesser wing coverts, the first or lower row of which is of a reddish cream colour, the rest a rich and splendid scarlet; legs and bill glossy brownish black; irides hazel; bill cylindrical above, compressed at the sides, straight running considerably up the forehead, where it is prominent, rounding and flattish towards the tip, though sharp pointed; tongue nearly as long as the bill, tapering and lacerated at the end; tail rounded, the two middle feathers also somewhat shorter than those immediately adjoining.

The female, fig. 2, is seven inches and a quarter in length, and twelve inches in extent; chin a pale reddish cream; from the nostril over the eye, and from the lower mandible run two stripes of the same, speckled with black; from the posterior angle of the eye backwards, a streak of brownish black covers the auriculars; throat, and whole lower parts, thickly streaked with black and white, the latter inclining to cream on the breast; whole plumage above black, each feather bordered with pale brown, white or bay, giving the bird a very mottled appearance; lesser coverts the same; bill and legs as in the male.

The young birds at first greatly resemble the female; but have the plumage more broadly skirted with brown. The red, early shows itself on the lesser wing-coverts of the males, at first pale, inclining to orange, and partially disposed. The brown continues to skirt the black plumage for a year or two, so that it is rare to find an old male altogether destitute of some remains of it; but the red is generally complete in breadth and brilliancy by the succeeding spring. The females are entirely destitute of that ornament.

The flesh of these birds is but little esteemed, being in general black, dry and tough. Strings of them are, however, frequently seen exposed for sale in our markets.

GENUS 32. TURDUS. THRUSH.

SPECIES 1. *T. POLYGLOTTUS*.

MOCKING-BIRD.

[Plate X.—Fig. 1.]

Mimic Thrush, LATH. *Syn.* III, p. 40, No. 42.—*Arct. Zool.* II, No. 194.—*Turdus polyglottus*, LINN. *Syst.* I, p. 293, No. 10.—*Le grand Moqueur*, BRISS. *Orn.* II, p. 266, 29.—*BUFF. Ois.* III, p. 325. *Pl. Enl.* 558, fig. 1.—*Singing-bird, Mocking-bird, or Nightingale*, RAII *Syn.* p. 64, No. 5, p. 185, 31.—SLOAN, *Jam.* II, 306, No. 34.—*The Mock-bird*, CATESB. *Car.* I, Pl. 27.—PEALE'S *Museum*, No. 5288.

THIS celebrated and very extraordinary bird, in extent and variety of vocal powers, stands unrivalled by the whole feathered songsters of this or perhaps any other country; and shall receive from us, in this place, all that attention and respect which superior merit is justly entitled to.

Among the many novelties which the discovery of this part of the western continent first brought into notice, we may reckon that of the Mocking-bird; which is not only peculiar to the new world, but inhabits a very considerable extent of both North and South America; having been traced from the states of New England to Brazil; and also among many of the adjacent islands. They are, however, much more numerous in those states south, than in those north, of the river Delaware; being generally migratory in the latter, and resident (at least many of them) in the former. A warm climate, and low country, not far from the sea, seem most congenial to their nature; accordingly we find the species less numerous to the west than east of the great range of the Alleghany, in the same parallels of latitude. In the severe winter of 1808-9, I found these birds, occasionally,

from Fredericksburg in Virginia, to the southern parts of Georgia; becoming still more numerous the farther I advanced to the south. The berries of the red cedar, myrtle, holly, Cassine shrub, many species of smilax, together with gum berries, gall berries, and a profusion of others with which the luxuriant swampy thickets of those regions abound, furnish them with a perpetual feast. Winged insects, also, of which they are very fond, and remarkably expert at catching, abound there even in winter, and are an additional inducement to residency. Though rather a shy bird in the northern states, here he appeared almost half domesticated, feeding on the cedars and among the thickets of smilax, that lined the roads, while I passed within a few feet; playing around the planter's door, and hopping along the shingles. During the month of February I sometimes heard a solitary one singing; but on the second of March, in the neighbourhood of Savannah, numbers of them were heard on every hand, vieing in song with each other, and, with the Brown Thrush, making the whole woods vocal with their melody. Spring was at that time considerably advanced; and the thermometer ranging between 70 and 78 degrees. On arriving at New York, on the twenty-second of the same month, I found many parts of the country still covered with snow, and the streets piled with ice to the height of two feet; while neither the Brown Thrush nor Mocking-bird were observed, even in the lower parts of Pennsylvania, until the 20th of April.

The precise time at which the Mocking-bird begins to build his nest varies according to the latitude in which he resides. In the lower parts of Georgia he commences building early in April; but in Pennsylvania rarely before the tenth of May; and in New York, and the states of New England, still later. There are particular situations to which he gives the preference. A solitary thorn bush, an almost impenetrable thicket; an orange tree, cedar, or holly-bush, are favourite spots, and frequently selected. It is no great objection with him that these happen, sometimes, to be near the farm or mansion house: always ready to defend, but never over anxious to conceal, his nest, he very often builds

within a small distance of the house; and not unfrequently in a pear or apple tree; rarely at a greater height than six or seven feet from the ground. The nest varies a little with different individuals, according to the conveniency of collecting suitable materials. A very complete one is now lying before me, and is composed of the following substances. First a quantity of dry twigs and sticks, then withered tops of weeds of the preceding year, intermixed with fine straws, hay, pieces of wool and tow; and lastly, a thick layer of fine fibrous roots, of a light brown colour, lines the whole. The eggs, one of which is represented at fig. 2, are four, sometimes five, of a cinereous blue, marked with large blotches of brown. The female sits fourteen days; and generally produces two brood in the season, unless robbed of her eggs, in which case she will even build and lay the third time. She is, however, extremely jealous of her nest, and very apt to forsake it if much disturbed. It is even asserted by some of our bird dealers, that the old ones will actually destroy the eggs, and poison the young, if either the one or the other have been handled. But I cannot give credit to this unnatural report. I know from my own experience, at least, that it is not always their practice; neither have I ever witnessed a case of the kind above mentioned. During the period of incubation neither cat, dog, animal or man, can approach the nest without being attacked. The cats, in particular, are persecuted whenever they make their appearance, till obliged to retreat. But his whole vengeance is most particularly directed against that mortal enemy of his eggs and young, the black snake. Whenever the insidious approaches of this reptile are discovered, the male darts upon it with the rapidity of an arrow, dexterously eluding its bite, and striking it violently and incessantly about the head, where it is very vulnerable. The snake soon becomes sensible of its danger, and seeks to escape; but the intrepid defender of his young redoubles his exertions, and, unless his antagonist be of great magnitude, often succeeds in destroying him. All its pretended powers of fascination avail it nothing against the vengeance of this noble bird. As the snake's strength begins to

flag the Mocking-bird seizes and lifts it up, partly from the ground, beating it with his wings, and when the business is completed, he returns to the repository of his young, mounts the summit of the bush, and pours out a torrent of song in token of victory.

As it is of some consequence to be able to distinguish a young male bird from a female, the following marks may be attended to; by which some pretend to be able to distinguish them in less than a week after they are hatched. These are, the breadth and purity of the white on the wings, for that on the tail is not so much to be depended on. This white, in a full grown male-bird, spreads over the whole nine primaries, down to, and considerably below, their coverts, which are also white, sometimes slightly tipped with brown. The white of the primaries also extends equally far on both vanes of the feathers. In the female the white is less pure, spreads over only seven or eight of the primaries, does not extend so far, and extends considerably farther down on the broad than on the narrow side of the feathers. The black is also more of a brownish cast.

The young birds, if intended for the cage, ought not to be left till they are nearly ready to fly; but should be taken rather young than otherwise; and may be fed, every half hour, with milk thickened with Indian meal; mixing occasionally with it a little fresh meat, cut or minced very fine. After they begin to eat of their own accord, they ought still to be fed by hand, though at longer intervals, and a few cherries, strawberries, &c., now and then thrown in to them. The same sort of food, adding grasshoppers and fruit, particularly the various kinds of berries in which they delight; and plenty of clear fine gravel, is found very proper for them after they are grown up. Should the bird at any time appear sick or dejected, a few spiders thrown in to him will generally remove these symptoms of disease.

If the young bird is designed to be taught by an old one, the best singer should be selected for this office, and no other allowed to be beside him. Or if by the bird organ, or mouth-whistling, it should be begun early, and continued, pretty constantly,

by the same person, until the scholar, who is seldom inattentive, has completely acquired his lesson. The best singing birds, however, in my own opinion, are those that have been reared in the country, and educated under the tuition of the feathered choristers of the surrounding fields, groves, woods, and meadows.

The plumage of the Mocking-bird, though none of the homeliest, has nothing gaudy or brilliant in it, and, had he nothing else to recommend him, would scarcely entitle him to notice, but his figure is well proportioned, and even handsome. The ease, elegance and rapidity of his movements, the animation of his eye, and the intelligence he displays in listening and laying up lessons from almost every species of the feathered creation within his hearing, are really surprising, and mark the peculiarity of his genius. To these qualities we may add that of a voice full, strong, and musical, and capable of almost every modulation, from the clear mellow tones of the Wood Thrush, to the savage scream of the Bald Eagle. In measure and accent he faithfully follows his originals. In force and sweetness of expression he greatly improves upon them. In his native groves, mounted on the top of a tall bush or half-grown tree, in the dawn of dewy morning, while the woods are already vocal with a multitude of warblers, his admirable song rises preeminent over every competitor. The ear can listen to his music alone, to which that of all the others seems a mere accompaniment. Neither is this strain altogether imitative. His own native notes, which are easily distinguishable by such as are well acquainted with those of our various song birds are bold and full, and varied seemingly beyond all limits. They consist of short expressions of two, three, or at the most five or six syllables; generally interspersed with imitations, and all of them uttered with great emphasis and rapidity; and continued, with undiminished ardour, for half an hour, or an hour at a time. His expanded wings and tail, glistening with white, and the buoyant gayety of his action, arresting the eye, as his song most irresistibly does the ear. He sweeps round with enthusiastic ecstasy—he mounts

and descends as his song swells or dies away; and, as my friend Mr. Bartram has beautifully expressed it, "He bounds aloft "with the celerity of an arrow, as if to recover or recal his "very soul, expired in the last elevated strain."* While thus exerting himself, a bystander destitute of sight, would suppose that the whole feathered tribes had assembled together, on a trial of skill; each striving to produce his utmost effect; so perfect are his imitations. He many times deceives the sportsman, and sends him in search of birds that perhaps are not within miles of him; but whose notes he exactly imitates: even birds themselves are frequently imposed on by this admirable mimic, and are decoyed by the fancied calls of their mates; or dive, with precipitation, into the depth of thickets, at the scream of what they suppose to be the Sparrow Hawk.

The Mocking-bird loses little of the power and energy of his song by confinement. In his domesticated state, when he commences his career of song, it is impossible to stand by uninterested. He whistles for the dog; Caesar starts up, wags his tail, and runs to meet his master. He squeaks out like a hurt chicken, and the hen hurries about with hanging wings, and bristled feathers, clucking to protect its injured brood.—The barking of the dog, the mewing of the cat, the creaking of a passing wheelbarrow, follow, with great truth and rapidity. He repeats the tune taught him by his master, though of considerable length, fully and faithfully. He runs over the quiverings of the Canary, and the clear whistlings of the Virginia Nightingale, or Red-bird, with such superior execution and effect, that the mortified songsters feel their own inferiority, and become altogether silent; while he seems to triumph in their defeat by redoubling his exertions.

This excessive fondness for variety, however, in the opinion of some, injures his song. His elevated imitations of the Brown Thrush are frequently interrupted by the crowing of cocks; and the warblings of the Blue-bird, which he exquisitely manages, are mingled with the screaming of swallows, or the cackling of

* Travels, p. 32. Introd.

hens; amidst the simple melody of the Robin we are suddenly surprised by the shrill reiterations of the Whippoorwill; while the notes of the Kildeer, Blue Jay, Martin, Baltimore, and twenty others, succeed, with such imposing reality, that we look round for the originals, and discover, with astonishment, that the sole performer in this singular *concert* is the admirable bird now before us. During this exhibition of his powers he spreads his wings, expands his tail, and throws himself around the cage in all the ecstasy of enthusiasm, seeming not only to sing, but to dance, keeping time to the measure of his own music. Both in his native and domesticated state, during the solemn stillness of night, as soon as the moon rises in silent majesty, he begins his delightful solo; and serenades us the live long night with a full display of his vocal powers, making the whole neighbourhood ring with his inimitable medley.*

Were it not to seem invidious in the eyes of foreigners, I might in this place make a comparative statement between the powers of the Mocking-bird, and the only bird I believe in the world worthy of being compared with him, the European Nightingale. This, however, I am unable to do from my own observation, having never myself heard the song of the latter; and even if I had, perhaps something might be laid to the score of *partiality*, which, as a faithful biographer, I am anxious to avoid. I shall, therefore, present the reader with the opinion of a distin-

* The hunters in the southern states, when setting out upon an excursion by night, as soon as they hear the Mocking-bird begin to sing know that the moon is rising.

A certain anonymous author, speaking of the Mocking-birds in the island of Jamaica, and their practice of singing by moonlight, thus gravely philosophizes, and attempts to account for the habit. "It is not certain," says he, "whether they are kept so wakeful by the clearness of the light, or by any extraordinary attention and vigilance, at such times, for the protection of their nursery from the piratical assaults of the Owl and the night Hawk. It is possible that fear may operate upon them, much in the same manner as it has been observed to affect some cowardly persons, who whistle stoutly in a lonesome place, while their mind is agitated with the terror of thieves or hobgoblins." *Hist. of Jam.* v. III, p. 894, quarto.

guished English naturalist, and curious observer, on this subject, the Hon. Daines Barrington, who at the time he made the communication was vice president of the Royal Society, to which they were addressed.*

“It may not be improper, here,” says this gentleman, “to consider whether the Nightingale may not have a very formidable competitor in the American Mocking-bird; though almost all travellers agree, that the concert in the European woods is superior to that of the other parts of the globe. I have happened, however, to hear the American Mocking-bird, in great perfection, at Messrs. Vogels and Scotts, in Love-lane, Eastcheap. This bird is believed to be still living, and hath been in England these six years. During the space of a minute he imitated the Wood-lark, Chaffinch, Blackbird, Thrush, and Sparrow; I was told also that he would bark like a dog; so that the bird seems to have no choice in his imitations, though his pipe comes nearest to our Nightingale of any bird I have yet met with. With regard to the original notes, however, of this bird, we are still at a loss, as this can only be known by those who are accurately acquainted with the song of the other American birds. Kalm indeed informs us, that the natural song is excellent;† but this traveller seems not to have been long enough in America to have distinguished what were the genuine notes: with us mimics do not often succeed but in imitations. I have little doubt, however, but that this bird would be fully equal to the song of the Nightingale in its whole compass; but then from the attention which the *Mocker* pays to any other sort of disagreeable noise, these capital notes would be always debased by a bad mixture.”

On this extract I shall make a few remarks. If, as is here conceded, the Mocking-bird be fully equal to the song of the Nightingale; and, as I can with confidence add, not only to that but to the song of almost every other bird; besides being capable of exactly imitating various other sounds and voices of animals, his vocal powers are unquestionably superior to those of the Night-

* Phil. Trans, vol. LXII, part II, p. 284. † Travels, vol. I, p. 219.

ingale, which possesses its own native notes alone. Further; if we consider, as is asserted by Mr. Barrington, that "one reason of "the Nightingale's being more attended to than others is, that "it sings in the night;" and if we believe with Shakspeare, that

"The Nightingale, if she should sing by day
When every goose is cackling, would be thought
No better a musician than a Wren,"

what must we think of that bird, who in the glare of day, when a multitude of songsters are straining their throats in melody, overpowers all competition; and by the superiority of his voice, expression and action, not only attracts every ear, but frequently strikes dumb his mortified rivals;—when the silence of night as well as the bustle of day, bear witness to his melody; and when even in captivity, in a foreign country, he is declared by the best judges in that country, to be fully equal to the song of their sweetest bird *in its whole compass*? The supposed degradation of his song by the introduction of extraneous sounds, and unexpected imitations, is, in fact, one of the chief excellencies of this bird; as these changes give a perpetual novelty to his strain, keep attention constantly awake, and impress every hearer with a deeper interest in what is to follow. In short, if we believe in the truth of that mathematical axiom, that the whole is greater than a part, all that is excellent or delightful, amusing or striking, in the music of birds, must belong to *that* admirable songster, whose vocal powers are equal to the whole compass of their whole strains.

The native notes of the Mocking-bird have considerable resemblance to those of the Brown Thrush, but may easily be distinguished by their greater rapidity, sweetness, energy of expression and variety. Both, however, have in many parts of the United States, particularly in those to the south, obtained the name of *Mocking-bird*. The first, or Brown Thrush, from its inferiority of song being called the French, and the other the English Mocking-bird. A mode of expression probably originat-

ing in the prejudices of our forefathers; with whom every thing *French* was inferior to every thing *English*.*

The Mocking-bird is frequently taken in trap-cages, and by proper management may be made sufficiently tame to sing. The upper parts of the cage (which ought to be of wood) should be kept covered, until the bird becomes a little more reconciled to confinement. If placed in a wire cage, uncovered, he will soon destroy himself in attempting to get out. These birds, however, by proper treatment may be brought to sing perhaps superior to those raised by hand, and cost less trouble. The opinion which the naturalists of Europe entertain of the great difficulty of raising the Mocking-bird, and, that not one in ten survives, is very incorrect. A person called on me a few days ago, with twenty-nine of these birds, old and young, which he had carried about the fields with him for several days, for the convenience of feeding them while engaged in trapping others. He had carried them thirty miles, and intended carrying them ninety-six miles farther, *viz.* to New York; and told me, that he did not expect to lose one out of ten of them. Cleanliness, and regularity in feeding, are the two principal things to be attended to, and these rarely fail to succeed.

The eagerness with which the nest of the Mocking-bird is sought after in the neighbourhood of Philadelphia, has rendered this bird extremely scarce for an extent of several miles around the city. In the country round Wilmington and Newcastle, they are very numerous, from whence they are frequently brought here for sale. The usual price of a singing bird is from seven to fifteen, and even twenty dollars. I have known fifty dollars paid for a remarkable fine singer; and one instance where one hundred dollars were refused for a still more extraordinary one.

Attempts have been made to induce these charming birds to pair, and rear their young in a state of confinement, and the result

* The observations of Mr. Barrington, in the paper above referred to, make this supposition still more probable. "Some Nightingales," says he, "are so vastly inferior, that the bird-catchers will not keep them, branding them with the name of Frenchmen." p. 283.

has been such as to prove it, by proper management, perfectly practicable. In the spring of 1808, a Mr. Klein, living in North Seventh street, Philadelphia, partitioned off about twelve feet square in the third story of his house. This was lighted by a pretty large wire-grated window. In the centre of this small room he planted a cedar bush, five or six feet high, in a box of earth; and scattered about a sufficient quantity of materials suitable for building. Into this place a male and female Mocking-bird were put, and soon began to build. The female laid five eggs, all of which she hatched, and fed the young with great affection until they were nearly able to fly. Business calling the proprietor from home, for two weeks, he left the birds to the care of his domestics; and on his return found, to his great regret, that they had been neglected in food. The young ones were all dead, and the parents themselves nearly famished. The same pair have again commenced building this season, in the same place, and have at this time, July 4, three young likely to do well. The place might be fitted up with various kinds of shrubbery, so as to resemble their native thickets; and ought to be as remote from noise and interruption of company as possible, and strangers rarely allowed to disturb or even approach them.

The Mocking-bird is nine and a half inches long, and thirteen in breadth. Some individuals are, however, larger, and some smaller, those of the first hatch being uniformly the biggest and stoutest.* The upper parts of the head, neck and back, are a dark, brownish ash; and when new moulted, a fine light gray; the wings and tail are nearly black, the first and second rows of coverts tipped with white; the primary coverts, in some males, are wholly white, in others tinged with brown. The three first primaries are white from their roots as far as their coverts; the white on the next six extends from an inch to one and three-fourths farther down, descending equally on both sides of the feather;

* Many people are of opinion that there are two sorts, the large and the small Mocking-bird; but after examining great numbers of these birds in various regions of the United States, I am satisfied that this variation of size is merely accidental, or owing to the circumstance above mentioned.

the tail is cuneiform, the two exterior feathers wholly white, the rest, except the middle ones, tipped with white; the chin is white; sides of the neck, breast, belly and vent a brownish white, much purer in wild birds than in those that have been domesticated; iris of the eye yellowish cream coloured, inclining to golden; bill black, the base of the lower mandible whitish; legs and feet black, and strong. The female very much resembles the male; what difference there is has been already pointed out in a preceding part of this account. The breast of the young bird is spotted like that of the Thrush.

Mr. William Bartram observes of the Mocking-bird, that “formerly, say thirty or forty years ago, they were numerous, “and often staid all winter with us, or the year through, feeding on the berries of ivy, smilax, grapes, persimmons, and “other berries. The ivy (*Hedera helex*) they were particularly “fond of, though a native of Europe. We have an ancient plant “adhering to the wall of the house, covering many yards of “surface; this vine is very fruitful, and here many would feed “and lodge during the winter, and in very severe cold weather “sit on the top of the chimney to warm themselves.” He also adds, “I have observed that the Mocking-bird ejects from his “stomach through his mouth the hard kernels of berries, such “as smilax, grapes, &c. retaining the pulpy part.”*

* Letter from Mr. Bartram to the author.

SPECIES 2. *TURDUS RUFUS*.

FERRUGINOUS THRUSH.

[Plate XIV.—Fig. 1.]

Fox-coloured Thrush, CATESBY, I, 28.—*Turdus rufus*, LINN. *Syst.* 293.—LATH. III, 39.—*La Grive de la Caroline*, BRISS. II, 223.—*Le Moqueur François*, DE BUFF. III, 323. *Pl. Enl.* 645.—*Arct. Zool.* p. 335, No. 195.—PEALE'S *Museum*, No. 5285.

THIS is the Brown Thrush, or Thrasher of the middle and eastern states; and the French Mocking-bird of Maryland, Virginia, and the Carolinas. It is the largest of all our Thrushes, and is a well known and very distinguished songster. About the middle or twentieth of April, or generally about the time the cherry trees begin to blossom, he arrives in Pennsylvania; and from the tops of our hedge rows, sassafras, apple or cherry trees, he salutes the opening morning with his charming song, which is loud, emphatical, and full of variety. At that serene hour you may plainly distinguish his voice full half a mile off. These notes are not imitative, as his name would import, and as some people believe, but seem solely his own; and have considerable resemblance to the notes of the Song Thrush (*Turdus musicus*) of Britain. Early in May he builds his nest, choosing a thorn bush, low cedar, thicket of briars, dogwood sapling, or cluster of vines for its situation, generally within a few feet of the ground. Outwardly it is constructed of small sticks; then layers of dry leaves; and lastly lined with fine fibrous roots; but without any plaster. The eggs are five, thickly sprinkled with ferruginous grains on a very pale bluish ground. They generally have two brood in a season. Like all birds that build near the ground, he shows great anxiety for the safety of his nest and

young, and often attacks the black-snake in their defence, generally too with success; his strength being greater and his bill stronger and more powerful than any other of his tribe within the United States. His food consists of worms, which he scratches from the ground, caterpillars, and many kinds of berries. Beetles and the whole race of coleopterous insects, wherever he can meet with them, are sure to suffer. He is accused, by some people, of scratching up the hills of indian corn, in planting time; this may be partly true; but for every grain of maize he pilfers I am persuaded he destroys five hundred insects; particularly a large dirty-coloured grub, with a black head, which is more pernicious to the corn and other grain and vegetables, than nine-tenths of the whole feathered race. He is an active, vigorous bird, flies generally low, from one thicket to another, with his long broad tail spread like a fan; is often seen about briar and bramble bushes, along fences; and has a single note or chuck, when you approach his nest. In Pennsylvania they are numerous, but never fly in flocks. About the middle of September, or as soon as they have well recovered from moulting, in which they suffer severely, they disappear for the season. In passing through the southern parts of Virginia, and south as far as Georgia, in the depth of winter, I found them lingering in sheltered situations, particularly on the border of swamps and rivers. On the first of March they were in full song round the commons at Savannah, as if straining to outstrip the Mocking-bird, that prince of feathered musicians.

The Thrasher is a welcome visitant in spring to every lover of rural scenery and rural song. In the months of April and May, when our woods, hedge-rows, orchard and cherry trees are one profusion of blossoms, when every object around conveys the sweet sensations of joy, and heaven's abundance is as it were showering around us, the grateful heart beats in unison with the varying elevated strains of this excellent bird; we listen to its notes with a kind of devotional ecstasy, as a morning hymn to the great and most adorable Creator of all. The human being who, amidst such scenes, and in such seasons of rural serenity

and delight, can pass them with cold indifference, and even contempt, I sincerely pity; for abject must that heart be and callous those feelings, and depraved that taste, which neither the charms of nature, nor the melody of innocence, nor the voice of gratitude or devotion can reach.

This bird inhabits North America from Canada to the point of Florida. They are easily reared, and become very familiar when kept in cages; and though this is rarely done, yet I have known a few instances where they sung in confinement with as much energy as in their native woods. They ought frequently to have earth and gravel thrown in to them, and have plenty of water to bathe in.

The Ferruginous Thrush is eleven inches and a half long, and thirteen in extent; the whole upper parts are of a bright reddish brown; wings crossed with two bars of white, relieved with black; tips and inner vanes of the wings dusky; tail very long, rounded at the end, broad, and of the same reddish brown as the back; whole lower parts yellowish white; the breast, and sides under the wings, beautifully marked with long pointed spots of black, running in chains; chin white; bill very long and stout, not notched, the upper mandible overhanging the lower a little, and beset with strong bristles at the base, black above, and whitish below near the base; legs remarkably strong and of a dusky clay color; iris of the eye brilliant yellow. The female may be distinguished from the male by the white on the wing being much narrower, and the spots on the breast less. In other respects their plumage is nearly alike.

Concerning the sagacity and reasoning faculty of this bird my venerable friend Mr. Bartram writes me as follows: "I remember to have reared one of these birds from the nest; which when full grown became very tame and docile. I frequently let him out of his cage to give him a taste of liberty; after fluttering and dusting himself in dry sand and earth, and bathing, washing and dressing himself, he would proceed to hunt insects, such as beetles, crickets, and other shelly tribes; but being very fond of wasps, after catching them and knocking them about to

“break their wings, he would lay them down, then examine if
“they had a sting, and with his bill squeeze the abdomen to
“clear it of the reservoir of poison, before he would swallow
“his prey. When in his cage, being very fond of dry crusts of
“bread, if upon trial the corners of the crumbs were too hard
“and sharp for his throat, he would throw them up, carry and
“put them in his water-dish to soften; then take them out and
“swallow them. Many other remarkable circumstances might
“be mentioned that would fully demonstrate faculties of *mind*;
“not only innate, but acquired ideas (derived from necessity in
“a state of domestication) which we call understanding and
“knowledge. We see that this bird could associate those ideas,
“arrange and apply them in a rational manner, according to
“circumstances. For instance, if he knew that it was the hard
“sharp corners of the crumb of bread that hurt his gullet, and
“prevented him from swallowing it, and that water would soft-
“en and render it easy to be swallowed, this knowledge must
“be acquired by observation and experience; or some other
“bird taught him. Here the bird perceived by the effect the
“cause, and then took the quickest, the most effectual, and
“agreeable method to remove that cause. What could the wisest
“man have done better? Call it reason, or instinct, it is the same
“that a sensible man would have done in this case.

“After the same manner this bird reasoned with respect to
“the wasps. He found, by experience and observation, that the
“first he attempted to swallow hurt his throat, and gave him
“extreme pain; and upon examination observed that the extre-
“mity of the abdomen was armed with a poisonous sting; and
“after this discovery, never attempted to swallow a wasp until
“he first pinched his abdomen to the extremity, forcing out
“the sting with the receptacle of poison.”

It is certainly a circumstance highly honourable to the character of birds, and corroborative of the foregoing sentiments, that those who have paid the most minute attention to their manners are uniformly their advocates and admirers. “He must,” said a gentleman to me the other day, when speaking of another per-

son, "He must be a good man; for those who have long known him and are most intimate with him respect him greatly and always speak well of him."

SPECIES 3. *TURDUS MELODUS*.*

WOOD THRUSH.

[Plate II.—Fig. 1.]

BARTRAM, p. 290.—PEALE'S *Museum*, No. 5264.

THIS bird is represented on the plate of its natural size; and particular attention has been paid to render the figure a faithful likeness of the original. It measures eight inches in length, and thirteen from tip to tip of the expanded wings; the bill is an inch long, the upper mandible of a dusky brown, bent at the point, and slightly notched; the lower a flesh colour towards the base; the legs are long, and, as well as the claws, of a pale flesh colour, or almost transparent. The whole upper parts are of a brown fulvous colour brightening into reddish on the head, and inclining to an olive on the rump and tail; chin white; throat and breast white, tinged with a light buff colour, and beautifully marked with pointed spots of black or dusky, running in chains from the sides of the mouth, and intersecting each other all over the breast to the belly, which, with the vent, is of a pure white; a narrow circle of white surrounds the eye, which is large, full, the pupil black, and the iris of a dark chocolate colour; the inside of the mouth is yellow. The male and female of this species, as indeed of almost the whole genus of Thrushes, differ so little as scarcely to be distinguished from each other. It is called by some the Wood Robin, by others the Ground Robin, and by some of our American ornithologists *Turdus minor*, though, as will hereafter appear, improperly. The present name has been adopted from Mr. William Bartram, who seems to have

* *Turdus mustelinus*, GMELIN, which name must be adopted:—We add the following synonyms:—*T. mustelinus*. GMEL. *Syst.* I. p. 817.—LATH. *Syn.* III, p. 28.—VIEILL. *Ois de l'Am. Sept.* pl. 62.—*Tawny Thrush*, *Arct. Zool.* II, p. 337, No. 198.

been the first and almost only naturalist who has taken notice of the merits of this bird.

This sweet and solitary songster inhabits the whole of North America from Hudson's bay to the peninsula of Florida. He arrives in Pennsylvania about the 20th of April, or soon after; and returns to the south about the beginning of October. The lateness or earliness of the season seems to make less difference in the times of arrival of our birds of passage than is generally imagined. Early in April the woods are often in considerable forwardness, and scarce a summer bird to be seen. On the other hand vegetation is sometimes no farther advanced on the 20th of April, at which time (*e. g.* this present year 1807) numbers of Wood Thrushes are seen flitting through the moist woody hollows, and a variety of the *Motacilla* genus chattering from almost every bush, with scarce an expanded leaf to conceal them. But at whatever time the Wood Thrush may arrive, he soon announces his presence in the woods. With the dawn of the succeeding morning, mounting to the top of some tall tree that rises from a low thick-shaded part of the woods, he pipes his few but clear and musical notes in a kind of ecstasy; the prelude, or symphony to which, strongly resembles the double tonguing of a German flute, and sometimes the tinckling of a small bell; the whole song consists of five or six parts, the last note of each of which is in such a tone as to leave the conclusion evidently suspended; the finale is finely managed, and with such charming effect as to sooth and tranquillize the mind, and to seem sweeter and mellower at each successive repetition. Rival songsters, of the same species, challenge each other from different parts of the wood, seeming to vie for softer tones and more exquisite responses. During the burning heat of the day, they are comparatively mute; but in the evening the same melody is renewed, and continued long after sun-set. Those who visit our woods, or ride out into the country at these hours, during the months of May and June, will be at no loss to recognize, from the above description, this pleasing musician. Even in dark, wet and gloomy weather, when scarce a single chirp is heard from any

other bird, the clear notes of the Wood Thrush thrill through the dropping woods, from morning to night; and it may truly be said that, the sadder the day the sweeter is his song.

The favourite haunts of the Wood Thrush are low, thick shaded hollows, through which a small brook or rill meanders, overhung with alder bushes that are mantled with wild vines. Near such a scene he generally builds his nest, in a laurel or alder bush. Outwardly it is composed of withered beech leaves of the preceding year, laid at bottom in considerable quantities, no doubt to prevent damp and moisture from ascending through, being generally built in low wet situations; above these are layers of knotty stalks of withered grass, mixed with mud, and smoothly plastered, above which is laid a slight lining of fine black fibrous roots of plants. The eggs are four, sometimes five, of a uniform light blue, without any spots.

The Wood Thrush appears always singly or in pairs, and is of a shy retired unobtrusive disposition. With the modesty of true merit he charms you with his song, but is content and even solicitous to be concealed. He delights to trace the irregular windings of the brook, where by the luxuriance of foliage the sun is completely shut out, or only plays in a few interrupted beams on the glittering surface of the water. He is also fond of a particular species of lichen which grows in such situations, and which, towards the fall, I have uniformly found in their stomachs; berries, however, of various kinds, are his principal food, as well as beetles and caterpillars. The feathers on the hind head are longer than is usual with birds which have no crest; these he sometimes erects; but this particular cannot be observed but on a close examination.

Those who have paid minute attention to the singing of birds know well, that the voice, energy, and expression, in the same tribe, differ as widely, as the voices of different individuals of the human species, or as one singer does from another. The powers of song in some individuals of the Wood Thrush have often surprised and delighted me. Of these I remember one, many years ago, whose notes I could instantly recognize on en-

tering the woods, and with whom I had been as it were acquainted from his first arrival. The top of a large white oak that overhung part of the glen, was usually the favourite pinnacle from whence he poured the sweetest melody; to which I had frequently listened till night began to gather in the woods; and the fire-flies to sparkle among the branches. But alas! in the pathetic language of the poet,

‘ One morn I miss’d him on th’ accustom’d hill,
Along the vale, and on his favourite tree—
Another came, nor yet beside the rill,
Nor up the glen nor in the wood was he.’

A few days afterwards, passing along the edge of the rocks, I found fragments of the wings and broken feathers of a Wood Thrush killed by the Hawk, which I contemplated with unfeigned regret, and not without a determination to retaliate on the first of these murderers I could meet with.

That I may not seem singular in my estimation of this bird, I shall subjoin an extract of a letter from a distinguished American gentleman to whom I had sent some drawings, and whose name, were I at liberty to give it, would do honour to my humble performance, and render any further observations on the subject from me unnecessary.

“As you are curious in birds, there is one well worthy your
“attention, to be found, or rather heard, in every part of
“America, and yet scarcely ever to be seen. It is in all the
“forests from spring to fall, and never but on the tops of the
“tallest trees, from which it perpetually serenades us with some
“of the sweetest notes, and as clear as those of the nightingale.
“I have followed it for miles without ever but once getting a
“good view of it. It is of the size and make of the mocking-
“bird, lightly thrush coloured on the back, and a grayish white
“on the breast and belly. Mr. —, my son-in-law, was in
“possession of one which had been shot by a neighbour, he
“pronounced it a *Muscicapa*, and I think it much resembles
“the *Mouche rolle de la Martinique*, 8 Buffon, 374, Pl. En-

“lum. 568. As it abounds in all the neighbourhood of Philadelphia, you may, perhaps, by patience and perseverance (of which much will be requisite) get a sight, if not a possession of it. I have for twenty years interested the young sportsmen of my neighbourhood to shoot me one; but as yet without success.”

It may seem strange that neither Sloane,* Catesby, Edwards nor Buffon, all of whom are said to have described this bird, should say any thing of its melody; or rather, assert that it had only a single cry or scream. This I cannot account for in any other way than by supposing, what I think highly probable, that this bird has never been figured or described by any of the above authors.

Catesby has, indeed, represented a bird, which he calls *Turdus minimus*,† but it is difficult to discover, either from the figure or description, what particular species is meant; or whether it be really intended for the Wood Thrush we are now describing. It resembles, he says, the English Thrush; but is less, never sings; has only a single note, and abides all the year in Carolina. It must be confessed that, except the first circumstance, there are few features of the Wood Thrush in this description. I have myself searched the woods of Carolina and Georgia, in winter, for this bird, in vain, nor do I believe that it ever winters in these states. If Mr. Catesby found his bird mute during spring and summer, it was not the Wood Thrush; otherwise he must have changed his very nature. But Mr. Edwards has also described and delineated the Little Thrush,‡ and has referred to Catesby as having drawn and engraved it before. Now this Thrush of Edwards I know to be really a different species; one not resident in Pennsylvania, but passing to the north in May, and returning the same way in October, and may be distinguished from the true Song Thrush (*Turdus melodus*) by the spots being much broader, brown, and not descending below the breast. It is also an inch shorter, with the cheeks of a bright tawny colour. Mr. William Bartram, who transmitted this bird,

* Hist. Jam. ii, 305.

† Catesby, Nat. Hist. Car. i, 31.

‡ Edwards, 296.

more than fifty years ago, to Mr. Edwards, by whom it was drawn and engraved, examined the two species in my presence; and on comparing them with the one in Edwards, was satisfied that the bird there figured and described is not the Wood Thrush (*Turdus melodus*), but the tawny-cheeked species above mentioned. This species I have never seen in Pennsylvania but in spring and fall. It is still more solitary than the former, and utters, at rare times, a single cry, similar to that of a chicken which has lost its mother. This very bird I found numerous in the Myrtle swamps of Carolina in the depth of winter, and I have not a doubt of its being the same which is described by Edwards and Catesby.

As the count de Buffon has drawn his description from those above mentioned, the same observations apply equally to what he has said on the subject; and the fanciful theory which this writer had formed to account for its want of song, vanishes into empty air; viz. that the Song Thrush of Europe (*Turdus musicus*) had, at some time after the creation, rambled round by the Northern ocean, and made its way to America; that advancing to the south it had there (of consequence) become degenerated by change of food and climate, so that its cry is now harsh and unpleasent, "as are the cries of all birds that live in wild countries inhabited by savages."*

For a figure and description of this passenger Thrush see the following species.

* Buffon, vol. iii, 289. The figure in Pl. Enl. 398, has little or no resemblance to the Wood Thrush, being of a deep green olive above, and spotted to the very vent, with long streaks of brown.

*SPECIES 4. TURDUS SOLITARIUS.**

HERMIT THRUSH.

[Plate XLIII.—Fig. 2.]

Little Thrush, CATESBY, I, 31.—EDWARDS, 296.—*Brown Thrush*,
Arct. Zool. 337, No. 199.—PEALE'S *Museum*, No. 3542.

THE dark solitary cane and myrtle swamps of the southern states are the favourite native haunts of this silent and recluse species, and the more deep and gloomy these are, the more certain we are to meet with this bird flitting among them. This is the species mentioned while treating of the Wood Thrush, as having been figured and described more than fifty years ago by Edwards, from a dried specimen sent him by my friend Mr. William Bartram, under the supposition that it was the Wood Thrush (*Turdus melodus*.) It is however considerably less, very differently marked, and altogether destitute of the clear voice and musical powers of that charming minstrel. It also differs in remaining in the southern states during the whole year; whereas the Wood Thrush does not winter even in Georgia; nor arrives within the southern boundary of that state until some time in April.

The Hermit Thrush is rarely seen in Pennsylvania, unless for a few weeks in spring and late in the fall, long after the Wood Thrush has left us, and when scarcely a summer bird remains in the woods. In both seasons it is mute, having only, in spring, an occasional squeak like that of a young stray chicken.

* *Turdus minor*, GMELIN, which name having the priority must be adopted.

We add the following synonyms:—*T. minor*, GM. *Syst.* I, p. 809.—LATH. *Syn.* III, p. 20. No. 5.—*Mauvis de la Caroline*, BUFF. *Pl. Enl.* 556, fig. 2. *Turdus fuscus*, GMEL. *Syst.* I, p. 817.—LATH. *Syn.* III, p. 28, No. 16.

Along the Atlantic coast in New Jersey they remain longer and later, as I have observed them there late in November. In the cane swamps of the Chactaw nation they were frequent in the month of May, on the twelfth of which I examined one of their nests on a horizontal branch immediately over the path. The female was sitting, and left it with great reluctance, so that I had nearly laid my hand on her before she flew. The nest was fixed on the upper part of the body of the branch, and constructed with great neatness; but without mud or plaster, contrary to the custom of the Wood Thrush. The outside was composed of a considerable quantity of coarse rooty grass, intermixed with horse hair, and lined with a fine green coloured, thread-like grass, perfectly dry, laid circularly with particular neatness. The eggs were four, of a pale greenish blue, marked with specks and blotches of olive, particularly at the great end. I also observed this bird on the banks of the Cumberland river in April. Its food consists chiefly of berries, of which these low swamps furnish a perpetual abundance, such as those of the holly, myrtle, gall bush, (a species of *vaccinium*,) yapon shrub, and many others.

A superficial observer would instantly pronounce this to be only a variety of the Wood Thrush; but taking into consideration its difference of size, colour, manners, want of song, secluded habits, differently formed nest, and spotted eggs, all unlike those of the former, with which it never associates, it is impossible not to conclude it to be a distinct and separate species, however near it may approach to that of the former. Its food, and the country it inhabits for half the year being the same, neither could have produced those differences; and we must believe it to be now, what it ever has and ever will be, a distinct connecting link in the great chain of this part of animated nature; all the sublime reasoning of certain theoretical closet philosophers to the contrary notwithstanding.

Length of the Hermit Thrush seven inches, extent ten inches and a half; upper parts plain deep olive brown, lower dull white; upper part of the breast and throat dull cream colour, deepest

where the plumage falls over the shoulders of the wing, and marked with large dark brown pointed spots; ear feathers and line over the eye cream, the former mottled with olive; edges of the wings lighter, tips dusky; tail coverts and tail inclining to a reddish fox colour. In the Wood Thrush these parts incline to greenish olive. Tail slightly forked; legs dusky; bill black above and at the tip, whitish below; iris black and very full; chin whitish.

The female differs very little, chiefly in being generally darker in the tints, and having the spots on the breast larger and more dusky.

SPECIES 5. TURDUS MUSTELINUS.

TAWNY THRUSH

[Plate XLIII.—Fig. 3.]

PEALE'S *Museum*, No. 5570.

THIS species makes its appearance in Pennsylvania from the south regularly about the beginning of May, stays with us a week or two, and passes on to the north and to the high mountainous districts to breed. It has no song, but a sharp chuck. About the twentieth of May I met with numbers of them in the great Pine swamp, near Pocano; and on the twenty-fifth of September, in the same year, I shot several of them in the neighbourhood of Mr. Bartram's place. I have examined many of these birds in spring, and also on their return in fall, and found very little difference among them between the male and female. In some specimens the wing coverts were brownish yellow; these appeared to be young birds. I have no doubt but they breed in the northern high districts of the United States; but I have not yet been able to discover their nests.

The Tawny Thrush is ten inches long, and twelve inches in extent; the whole upper parts are a uniform tawny brown; the lower parts white; sides of the breast and under the wings slightly tinged with ash; chin white; throat and upper parts of the breast cream coloured, and marked with pointed spots of brown; lores pale ash, or bluish white; cheeks dusky brown; tail nearly even at the end, the shafts of all, as well as those of the wing quills, continued a little beyond their webs; bill black above and at the point, below at the base flesh coloured; corners of the mouth yellow; eye large and dark, surrounded with a white ring; legs long, slender and pale brown.

Though I have given this bird the same name that Mr. Pennant has applied to one of our Thrushes, it must not be consid-

ered as the same; the bird which he has denominated the *Tawny Thrush* being evidently from its size, markings, &c.

No description of the bird here figured, has, to my knowledge, appeared in any former publication.*

* As Wilson supposed, this bird had not been previously described; he has however created some confusion by giving to it the name of an old species. That name (*mustelinus*) must be restored to the bird to which it was originally applied, the *Wood Thrush*, and the *Turdus Wilsonii* as proposed by prince Musignano, be adopted for this.

Synonymes: *T. Wilsonii* BONAPARTE, *Obs. Journ. Acad. Nat. Sc.* vol. **17**, p. 34.—*Id.* *Synop. Annales Lyc. Nat. Hist.* Vol. **11**, p. 75.

*SPECIES 6. TURDUS AQUATICUS.**

WATER THRUSH.

[Plate XXIII.—Fig. 5.]

PEALE'S *Museum*, No. 6896.

THIS bird is remarkable for its partiality to brooks, rivers, shores, ponds, and streams of water; wading in the shallows in search of aquatic insects, wagging the tail almost continually, chattering as it flies, and, in short, possesses many strong traits and habits of the Water Wagtail. It is also exceedingly shy, darting away on the least attempt to approach it, and uttering a sharp chip, repeatedly, as if greatly alarmed. Among the mountain streams in the state of Tennessee, I found a variety of this bird pretty numerous, with legs of a bright yellow colour; in other respects it differed not from the rest. About the beginning of May it passes through Pennsylvania to the north; is seen along the channels of our solitary streams for ten or twelve days; afterwards disappears until August. It is probable that it breeds in the higher mountainous districts even of this state, as do many other of our spring visitants that regularly pass a week or two with us in the lower parts, and then retire to the mountains and inland forests to breed.

* Prince Musignano asserts that this is the *Sylvia noveboracensis*, LATHAM, and quotes the following synonyms:—*MOTACILLA noveboracensis*, GMEL.—*SYLVIA noveboracensis*, LATH.—VIEILL. *pl.* 82.—*MONTACILLA tigrina*, var. β , GMEL. female and young.—*SYLVIA tigrina*, var. β , LATH. female and young.—*SYLVIA anthoides*, VIEILL. *Nouv. dict. d'hist. nat.*—*FICEDULA dominicensis fusca*, BRISS. female and young.—*Fauvette tachetée de la Louisiane*, BUFF. *Pl. Enl.* 752, *f.* 1, a very bad figure.—*New York warbler*, PENN. *Arct. Zool.*—LATH. *Syn.*

It resembles in habits and appearance, and is we believe, also, the *Turdus motacilla* cf VIEILLOT, *pl.* 65.

But Pennsylvania is not the favourite resort of this species. The cane-brakes, swamps, river shores, and deep watery solitudes of Louisiana, Tennessee, and the Mississippi Territory, possess them in abundance; there they are eminently distinguished by the loudness, sweetness and expressive vivacity of their notes, which begin very high and clear, falling with an almost imperceptible gradation till they are scarcely articulated. At these times the musician is perched on the middle branches of a tree over the brook or river bank, pouring out his charming melody, that may be distinctly heard for nearly half a mile.

The voice of this little bird appeared to me so exquisitely sweet and expressive, that I was never tired of listening to it, while traversing the deep shaded hollows of those cane-brakes where it usually resorts. I have never yet met with its nest.

The Water Thrush is six inches long, and nine and a half in extent; the whole upper parts are of a uniform and very dark olive, with a line of white extending over the eye, and along the sides of the neck; the lower parts are white, tinged with yellow ochre; the whole breast and sides are marked with pointed spots or streaks of black or deep brown; bill dusky brown; legs flesh-coloured; tail nearly even; bill formed almost exactly like the Golden-crowned Thrush, (*Turdus arocapillus*) and except in frequenting the water, much resembling it in manners. Male and female nearly alike.

SPECIES 7. TURDUS AUROCAPILLUS.

GOLDEN-CROWNED THRUSH.

[Plate XIV.—Fig. 2.]

EDW. 252.—LATH. III, 21.—*La figuier a tete d'or*, BRISS. III, 504.
—*La Grivelette de St. Domingue*, BUFF. III, 317. *Pl. Ent.* 398,
—*Arct. Zool.* p. 339, No. 203.—*Turdus minimus, vertice Aurio*,
the least Golden-crown Thrush, BARTRAM, p. 290.—PEALE'S
Museum, No. 7122.

THOUGH the epithet *golden-crowned*, is not very suitable for this bird, that part of the head being rather of a brownish orange; yet, to avoid confusion, I have retained it.

This is also a migratory species, arriving in Pennsylvania late in April, and leaving us again late in September. It is altogether an inhabitant of the woods, runs along the ground like a lark, and even along the horizontal branches, frequently moving its tail in the manner of the Wagtails. It has no song; but a shrill, energetic twitter, formed by the rapid reiteration of two notes, *peche, peche, peche*, for a quarter of a minute at a time. It builds a snug, somewhat singular nest, on the ground, in the woods, generally on a declivity facing the south. This is formed of leaves and dry grass, and lined with hair. Though sunk below the surface, it is arched over, and only a small hole left for entrance; the eggs are four, sometimes five, white, irregularly spotted with reddish brown, chiefly near the great end. When alarmed it escapes from the nest with great silence and rapidity, running along the ground like a mouse, as if afraid to tread too heavily on the leaves; if you stop to examine its nest, it also stops, droops its wings, flutters and tumbles along, as if hardly able to crawl, looking back now and then to see whether you are taking notice of it. If you slowly follow, it leads you fifty

or sixty yards off, in a direct line from its nest, seeming at every advance to be gaining fresh strength; and when it thinks it has decoyed you to a sufficient distance, it suddenly wheels off and disappears. This kind of deception is practised by many other species of birds that build on the ground; and is sometimes so adroitly performed as actually to have the desired effect of securing the safety of its nest and young.

This is one of those birds frequently selected by the Cow-pen Bunting to be the foster-parent of its young. Into the nest of this bird the Cow-bird deposits its egg, and leaves the result to the mercy and management of the Thrush, who generally performs the part of a faithful and affectionate nurse to the foundling.

The Golden-crowned Thrush is six inches long, and nine in extent; the whole upper parts, except the crown and hind head, are a rich yellow olive; the tips of the wings, and inner vanes of the quills, are dusky brown; from the nostrils a black strip passes to the hind head on each side, between which lies a bed of brownish orange; the sides of the neck are whitish; the whole lower parts white, except the breast, which is handsomely marked with pointed spots of black, or deep brown, as in the figure; round the eye is a narrow ring of yellowish white; legs pale flesh colour; bill dusky above, whitish below. The female has the orange on the crown considerably paler.

This bird might with propriety be ranged with the Wagtails, its notes, manners, and habit of building on the ground being similar to these. It usually hatches twice in the season; feeds on small bugs, and the larvæ of insects, which it chiefly gathers from the ground. It is very generally diffused over the United States; and winters in Jamaica, Hispaniola, and other islands of the West Indies.

SPECIES 8. TURDUS LIVIDUS.

CAT-BIRD.

[Plate XIV.—Fig. 3.]

Muscicapa Carolinensis, LINN. *Syst.* 328.—*Le gobe-mouche brun de Virginie*, BRISS. II, 365.—*Cat-bird*, CATESB. I, 66.—LATHAM, II, 353.—*Le moucherolle de Virginie*, BUFF. IV, 562.—*Lucar lividus, apice nigra, the Cat-bird, or Chicken-bird*, BARTRAM, p. 290.—PEALE'S *Muséum*, No. 6770.

WE have here before us a very common and very numerous species, in this part of the United States; and one as well known to all classes of people, as his favourite briars, or blackberry bushes. In spring or summer, on approaching thickets of brambles, the first salutation you receive is from the Cat-bird; and a stranger, unacquainted with its note, would instantly conclude that some vagrant orphan kitten had got bewildered among the briars, and wanted assistance; so exactly does the call of the bird resemble the voice of that animal. Unsuspicious, and extremely familiar, he seems less apprehensive of man than almost any other of our summer visitants; for whether in the woods, or in the garden, where he frequently builds his nest, he seldom allows you to pass without approaching to pay his respects, in his usual way. This humble familiarity and deference, from a stranger too, who comes to rear his young, and spend the summer with us, ought to entitle him to a full share of our hospitality. Sorry I am, however, to say, that this, in too many instances, is cruelly the reverse. Of this I will speak more particularly in the sequel.

About the twenty-eighth of February the Cat-bird first arrives in the lower parts of Georgia from the south, consequently winters not far distant, probably in Florida. On the second week

in April he usually reaches this part of Pennsylvania; and about the beginning of May has already succeeded in building his nest. The place chosen for this purpose is generally a thicket of briars or brambles, a thorn bush, thick vine, or the fork of a small sapling; no great solicitude is shown for concealment; though few birds appear more interested for the safety of their nest and young. The materials are dry leaves and weeds, small twigs and fine dry grass, the inside is lined with the fine black fibrous roots of some plant. The female lays four, sometimes five eggs, of a uniform greenish blue colour, without any spots. They generally raise two, and sometimes three brood in a season.

In passing through the woods in summer I have sometimes amused myself with imitating the violent chirping or squeaking of young birds, in order to observe what different species were around me, for such sounds, at such a season in the woods, are no less alarming to the feathered tenants of the bushes than the cry of fire or murder in the streets, is to the inhabitants of a large and populous city. On such occasions of alarm and consternation, the Cat-bird is the first to make his appearance, not singly, but sometimes half a dozen at a time, flying from different quarters to the spot. At this time those who are disposed to play with his feelings may almost throw him into fits, his emotion and agitation are so great, at the distressful cries of what he supposes to be his suffering young. Other birds are variously affected; but none show symptoms of such extreme suffering. He hurries backwards and forwards, with hanging wings and open mouth, calling out louder and faster, and actually screaming with distress, till he appears hoarse with his exertions. He attempts no offensive means; but he bewails, he implores, in the most pathetic terms with which nature has supplied him, and with an agony of feeling which is truly affecting. Every feathered neighbour within hearing hastens to the place to learn the cause of the alarm, peeping about with looks of consternation and sympathy. But their own powerful parental duties and domestic concerns soon oblige each to withdraw. At

any other season, the most perfect imitations have no effect whatever on him.

The Cat-bird will not easily desert its nest. I took two eggs from one which was sitting, and in their place put two of the Brown Thrush, or Thrasher; and took my stand at a convenient distance to see how she would behave. In a minute or two the male made his approaches, stooped down and looked earnestly at the strange eggs; then flew off to his mate, who was not far distant, with whom he seemed to have some conversation, and instantly returning, with the greatest gentleness took out both the Thrasher's eggs, first one and then the other, carried them singly about thirty yards, and dropt them among the bushes. I then returned the two eggs I had taken, and soon after the female resumed her place on the nest as before.

From the nest of another Cat-bird I took two half fledged young, and placed them in that of another which was sitting on five eggs. She soon turned them both out. The place where the nest was, not being far from the ground, they were little injured, and the male observing their helpless situation, began to feed them with great assiduity and tenderness.

I removed the nest of a Cat-bird, which contained four eggs, nearly hatched, from a fox grape vine, and fixed it firmly and carefully in a thicket of briars close by, without injuring its contents. In less than half an hour I returned, and found it again occupied by the female.

The Cat-bird is one of our earliest morning songsters, beginning generally before break of day, and hovering from bush to bush, with great sprightliness, when there is scarce light sufficient to distinguish him. His notes are more remarkable for singularity than for melody. They consist of short imitations of other birds, and other sounds; but his pipe being rather deficient in clearness and strength of tone, his imitations fail where these are requisite. Yet he is not easily discouraged, but seems to study certain passages with great perseverance; uttering them at first low, and as he succeeds, higher and more free; no ways embarrassed by the presence of a spectator even within a few yards of him.

On attentively listening for some time to him one can perceive considerable variety in his performance, in which he seems to introduce all the odd sounds and quaint passages he has been able to collect. Upon the whole, though we cannot arrange him with the grand leaders of our vernal choristers, he well merits a place among the most agreeable *general* performers.

This bird, as has been before observed, is very numerous in summer, in the middle states. Scarcely a thicket in the country is without its Cat-birds; and were they to fly in flocks, like many other birds, they would darken the air with their numbers. But their migrations are seldom observed, owing to their *gradual* progress and recession, in spring and autumn, to and from their breeding places. They enter Georgia late in February; and reach New England about the beginning of May. In their migrations they keep pace with the progress of agriculture; and the first settlers in many parts of the Genessee country have told me, that it was several years after they removed there before the Cat-bird made his appearance among them. With all these amiable qualities to recommend him few people in the country respect the Cat-bird. On the contrary, it is generally the object of dislike; and the boys of the United States entertain the same prejudice and contempt for this bird, its nest and young, as those of Britain do for the Yellow hammer and its nest, eggs and young. I am at a loss to account for this cruel prejudice. Even those by whom it is entertained, can scarcely tell you *why*; only they "hate Cat-birds;" as some persons tell you they hate Frenchmen, they hate Dutchmen, &c. expressions that bespeak their own narrowness of understanding, and want of liberality. Yet, after ruminating over in my own mind all the probable causes, I think I have at last hit on some of them; the principal of which seems to me to be a certain similarity of taste, and clashing of interest, between the Cat-bird and the farmer. The Cat-bird is fond of large ripe garden strawberries; so is the farmer, for the good price they bring in market. The Cat-bird loves the best and richest early cherries; so does the farmer, for they are sometimes the most pro-

fitable of his early fruit. The Cat-bird has a particular partiality for the finest ripe mellow pears; and these are also particular favourites with the farmer. But the Cat-bird has frequently the advantage of the farmer by snatching off the *first-fruits* of these delicious productions; and the farmer takes revenge by shooting him down with his gun, as he finds old hats, wind-mills and scarecrows are no impediments in his way to these forbidden fruits; and nothing but this resource, the *ultimatum* of farmers as well as kings, can restrain his visits. The boys are now set to watch the cherry trees with the gun; and thus commences a train of prejudices and antipathies that commonly continue through life. Perhaps too, the common note of the Cat-bird, so like the mewing of the animal whose name it bears, and who itself sustains no small share of prejudice, the homeliness of his plumage, and even his familiarity, so proverbially known to beget contempt, may also contribute to this mean, illiberal and persecuting prejudice; but with the generous and the good, the lovers of nature and of rural charms, the confidence which this familiar bird places in man by building in his garden, under his eye, the music of his song, and the interesting playfulness of his manners, will always be more than a recompence for all the little stolen morsels he snatches.

The Cat-bird measures nine inches in length; at a small distance he appears nearly black; but on a closer examination is of a deep slate colour above, lightest on the edges of the primaries, and of a considerably lighter slate colour below, except the under tail coverts, which are very dark red; the tail, which is rounded, and upper part of the head, as well as the legs and bill, are black. The female differs little in colour from the male. Latham takes notice of a bird exactly resembling this, being found at Kamtschatka; only it wanted the red under the tail: probably it might have been a young bird, in which the red is scarcely observable.

This bird has been very improperly classed among the Fly-Catchers. As he never seizes his prey on wing, has none of their manners, feeds principally on fruit, and seems to differ so little

from the Thrushes, I think he more properly belongs to the latter tribe than to any other genus we have. His bill, legs and feet, place and mode of building, the colour of the eggs, his imitative notes, food and general manners, all justify me in removing him to this genus.

The Cat-bird is one of those unfortunate victims, and indeed the principal, against which credulity and ignorance have so often directed the fascinating quality of the black-snake. A multitude of marvellous stories have been told me by people who have themselves *seen* the poor Cat-birds drawn, or sucked, as they sometimes express it, from the tops of the trees (which, by the by, the Cat-bird rarely visits) one by one, into the yawning mouth of the immoveable snake. It has so happened with me that in all the adventures of this kind that I have personally witnessed, the Cat-bird was actually the assailant, and always the successful one. These rencontres never take place but during the breeding time of birds; for whose eggs and young the snake has a particular partiality. It is no wonder that those species whose nests are usually built near the ground, should be the greatest sufferers, and the most solicitous for their safety; hence the cause why the Cat-bird makes such a distinguished figure in most of these marvellous narrations. That a poisonous snake will strike a bird or mouse, and allow it to remain till nearly expiring before he begins to devour it, our observations on the living rattle-snake at present kept by Mr. Peale, satisfy us is a fact; but that the same snake, with eyes, breath, or any other known quality he possesses, should be capable of drawing a bird, reluctantly, from the tree tops to its mouth, is an absurdity too great for *me* to swallow.

I am led to these observations by a note which I received this morning from my worthy friend Mr. Bartram. "Yesterday," says this gentleman, "I observed a conflict, or contest, between a Cat-bird and a snake. It took place in a gravel walk, in the garden, near a dry wall of stone. I was within a few yards of the combatants. The bird pounced or darted upon the snake, snapping his bill; the snake would then draw himself quickly

“into a coil, ready for a blow; but the bird would cautiously
“circumvent him at a little distance, now and then running up
“to and snapping at him; but keeping at a sufficient distance to
“avoid a blow. After some minutes it became a running fight,
“the snake retreating; and at last took shelter in the wall. The
“Cat-bird had young ones in the bushes near the field of bat-
“tle.

“This may show the possibility of poisonous snakes biting
“birds, the operation of the poison causing them to become as
“it were fascinated.”

SPECIES 9. *TURDUS MIGRATORIUS.*

ROBIN.

[Plate II.—Fig. 2.]

LINN. *Syst.* 1, p. 292, 6.—*Turdus Canadensis*, BRISS. II, p. 225, 9.—*La Litorne de Canada*, BUFF. III, p. 307.—*Grive de Canada*, PL. *Enl.* 556, 1.—*Fieldfare of Carolina*, CAT. *Car.* 1, 29.—*Red-breasted Thrush*, *Arct. Zool.* II, No. 196.—LATH. *Syn.* II, p. 26.—BARTRAM, p. 290.—PEALE'S *Museum*, No. 5278.

THIS well known bird, being familiar to almost every body, will require but a short description. It measures nine inches and a half in length; the bill is strong, an inch long, and of a full yellow, though sometimes black, or dusky near the tip of the upper mandible; the head, back of the neck and tail is black; the back and rump an ash colour; the wings are black edged with light ash; the inner tips of the two exterior tail feathers are white; three small spots of white border the eye; the throat and upper part of the breast is black, the former streaked with white; the whole of the rest of the breast, down as far as the thighs, is of a dark orange; belly and vent white, slightly waved with dusky ash; legs dark brown; claws black and strong. The colours of the female are more of the light ash, less deepened with black; and the orange on the breast is much paler, and more broadly skirted with white. The name of this bird bespeaks him a bird of passage, as are all the different species of Thrushes we have; but the one we are now describing being more unsettled, and continually roving about from one region to another, during fall and winter, seems particularly entitled to the appellation. Scarce a winter passes but innumerable thousands of them are seen in the lower parts of the whole Atlantic

states, from New Hampshire to Carolina, particularly in the neighbourhood of our towns; and from the circumstance of their leaving, during that season, the country to the north-west of the great range of the Alleghany, from Maryland northward, it would appear that they not only migrate from north to south, but from west to east, to avoid the deep snows that generally prevail on these high regions for at last four months in the year.

The Robin builds a large nest, often on an apple tree, plasters it in the inside with mud, and lines it with hay or fine grass. The female lays five eggs of a beautiful sea green. Their principal food is berries, worms and caterpillars. Of the first he prefers those of the sour gum (*Nyssa sylvatica*). So fond are they of Gum berries, that wherever there is one of these trees covered with fruit, and flocks of Robins in the neighbourhood, the sportsman need only take his stand near it, load, take aim, and fire; one flock succeeding another with little interruption, almost the whole day; by this method prodigious slaughter has been made among them with little fatigue. When berries fail they disperse themselves over the fields, and along the fences, in search of worms and other insects. Sometimes they will disappear for a week or two, and return again in greater numbers than before; at which time the cities pour out their sportsmen by scores, and the markets are plentifully supplied with them at a cheap rate. In January, 1807, two young men, in one excursion after them, shot thirty dozen. In the midst of such devastation, which continued many weeks, and by accounts extended from Massachusetts to Maryland, some humane person took advantage of a circumstance common to these birds in winter, to stop the general slaughter. The fruit called poke-berries (*Phytolacca decandra*, Linn.) is a favourite repast with the Robin, after they are mellowed by the frost. The juice of the berries is of a beautiful crimson, and they are eaten in such quantities by these birds, that their whole stomachs are strongly tinged with the same red colour. A paragraph appeared in the public papers, intimating, that from the great quantities of these berries which the Robins had fed on, they had become un-

wholesome, and even dangerous food; and that several persons had suffered by eating of them. The strange appearance of the bowels of the birds seemed to corroborate this account. The demand for, and use of them ceased almost instantly; and motives of self-preservation produced at once what all the pleadings of humanity could not effect.* When fat they are in considerable esteem for the table, and probably not inferior to the *turdi* of the ancients, which they bestowed so much pains on in feeding and fattening. The young birds are frequently and easily raised, bear the confinement of the cage, feed on bread, fruits, &c. sing well, readily learn to imitate parts of tunes, and are very pleasant and cheerful domestics. In these I have always observed that the orange on the breast is of a much deeper tint, often a dark mahogany or chestnut colour, owing no doubt to their food and confinement.

The Robin is one of our earliest songsters; even in March, while snow yet dapples the fields, and flocks of them are dispersed about, some few will mount a post or stake of the fence, and make short and frequent attempts at their song. Early in April, they are only to be seen in pairs, and deliver their notes with great earnestness, from the top of some tree detached from the woods. This song has some resemblance to, and indeed is no bad imitation of the notes of the Thrush or Thrasher (*Turdus rufus*); but if deficient in point of execution, he possesses more simplicity; and makes up in zeal what he wants in talent; so that the notes of the Robin, in spring, are universally known, and as universally beloved. They are as it were the prelude to the grand general concert, that is about to burst upon us from woods, fields and thickets, whitened with blossoms, and brea-

* Governor Drayton, in his "View of South Carolina," p. 86, observes, that "the Robins in winter devour the berries of the Bead tree (*Melia Azedarach*,) in such large quantities, that after eating of them they are observed to fall down, and are readily taken. This is ascribed more to distension from abundant eating than from any deleterious qualities of the plant." The fact, however, is, that they are literally choaked, many of the berries being too large to be swallowed.

thing fragrance. By the usual association of ideas, we therefore listen with more pleasure to this cheerful bird than to many others possessed of far superior powers, and much greater variety. Even his nest is held more sacred among schoolboys than that of some others; and while they will exult in plundering a Jay's or a Cat-bird's, a general sentiment of respect prevails on the discovery of a Robin's. Whether he owes not some little of this veneration to the well known and long established character of his namesake in Britain, by a like association of ideas, I will not pretend to determine. He possesses a good deal of his suavity of manners; and almost always seeks shelter for his young in summer, and subsistence for himself in the extremes of winter, near the habitations of man.

The Robin inhabits the whole of North America from Hudson's bay to Nootka sound, and as far south as Georgia, though they rarely breed on this side the mountains farther south than Virginia. Mr. Forster says, that about the beginning of May they make their appearance in pairs at the settlements of Hudson's bay, at Severn river; and adds, a circumstance altogether unworthy of belief, *viz.* that at Moose fort they build, lay and hatch in fourteen days! but that at the former place, four degrees more north, they are said to take twenty-six days.* They are also common in Newfoundland, quitting these northern parts in October. The young during the first season are spotted with white on the breast, and at that time have a good deal of resemblance to the Fieldfare of Europe.

Mr. Hearne informs us, that the red-breasted Thrushes, are commonly called at Hudson's bay the Red-birds; by some the Blackbirds, on account of their note; and by others the American Fieldfares. That they make their appearance at Churchill river about the middle of May, and migrate to the south early in the fall. They are seldom seen there but in pairs; and are never killed for their flesh except by the Indian boys.†

* Phil. Trans. lxii, 399.

† Journey to the Northern Ocean, p. 418, quarto. Lond. 1795.

Several authors have asserted, that the Red-Breasted Thrush cannot brook the confinement of the cage; and never sings in that state. But, except the Mocking-bird (*Turdus polyglottos*), I know of no native bird which is so frequently domesticated, agrees better with confinement, or sings in that state more agreeably than the Robin. They generally suffer severely in moulting time, yet often live to a considerable age. A lady who resides near Tarrytown, on the banks of the Hudson, informed me, that she raised, and kept one of these birds for seventeen years; which sung as well, and looked as sprightly, at that age as ever; but was at last unfortunately destroyed by a cat. The morning is their favourite time for song. In passing through the streets of our large cities, on Sunday, in the months of April and May, a little after day-break, the general silence which usually prevails without at that hour, will enable you to distinguish every house where one of these songsters resides, as he makes it then ring with his music.

Not only the plumage of the Robin, as of many other birds, is subject to slight periodical changes of colour, but even the legs, feet, and bill: the latter, in the male, being frequently found tipped and ridged for half its length with black. In the depth of winter their plumage is generally best; at which time the full-grown bird, in his most perfect dress, appears as exhibited in the plate.

GENUS 33. AMPELIS. CHATTERER.

SPECIES. *A. AMERICANA*.*

CEDAR-BIRD.

[Plate VII.—Fig. 1.]

Ampelis garrulus, LINN. *Syst.* I, 297, 1. β .—*Bombycilla Carolinensis*, BRISSON II, 337, 1. *Id.* 8vo. I, 251.—*Chatterer of Carolina*, CATESB. I, 46.—*Arct. Zool.* II, No. 207.—LATH. *Syn.* III, 93, 1. *A.*—EDW. 242.—COOK'S *Last Voyage*, II, 518.—ELLIS'S *Voyage*, II, 13.—PEALE'S *Museum*, No. 5608.

THE figure of the Cedar-bird which accompanies this description was drawn from a very beautiful specimen; and exhibits the form of its crest when erected, which gives it so gay and elegant an appearance. At pleasure it can lower and contract this so closely to its head and neck, as not to be observed. The plumage of these birds is of an exquisitely fine and silky texture, lying extremely smooth and glossy. Notwithstanding the name *Chatterers* given to them, they are perhaps the most silent species we have; making only a feeble, lisping sound, chiefly as they rise or alight. They fly in compact bodies, of from twenty to fifty; and usually alight so close together on the same tree, that one half are frequently shot down at a time. In the months of July and August, they collect together in flocks, and retire to the hilly parts of the state, the Blue Mountains and other col-

* This species does not belong to the genus *Ampelis* as at present restricted, but to the genus *Bombycilla* of Brisson, adopted by most modern Ornithologists.

Brisson's specific name, *Carolinensis*, having the priority must be adopted for this bird.

Wilson was wrong in quoting *Ampelis garrulus*, LINN. as a synonyme.

lateral ridges of the Alleghany, to enjoy the fruit of the *Vaccinium uliginosum*, whortle-berries, which grow there in great abundance; whole mountains, for many miles, being almost entirely covered with them; and where in the month of August I have myself found the Cedar-birds numerous. In October they descend to the lower cultivated parts of the country, to feed on the berries of the sour gum, and red cedar, of which last they are immoderately fond; and thirty or forty may sometimes be seen fluttering among the branches of one small cedar tree, plucking off the berries. They are also found as far south as Mexico, as appears from the accounts of Fernandez, Seba, and others.* Fernandez saw them near Tetzeuco, and calls them *Coquantotl*; says they delight to dwell in the mountainous parts of the country; and that their flesh and song are both indifferent.† Most of our epicures here, are, however, of a different opinion, as to their palatableness; for in the fall, and beginning of summer, when they become very fat, they are in considerable esteem for the table; and great numbers are brought to the market of Philadelphia, where they are sold from twelve to twenty-five cents per dozen. During the whole winter and spring they are occasionally seen; and about the twenty-fifth of May appear in numerous parties, making great havoc among the early cherries, selecting the best and ripest of the fruit. Nor are they easily intimidated by the presence of Mr. Scarecrow; for I have seen a flock deliberately feasting on the fruit of a loaded cherry tree, while on the same tree one of these *guardian angels*, and a very formidable one too, stretched his stiffened arms, and displayed his dangling legs, with all the pomposity of authority! At this time of the season most of our resident birds, and many of our summer visitants, are sitting, or have young; while even on the first of June, the eggs in the ovary of the female Cedar-bird are no larger than mustard seed;

* The figure of this bird in Seba's voluminous work is too wretched for criticism; it is there called "Oiseau Xomotl d'Amerique huppee." Seb. II, p. 66, t. 65, fig. 5.

† Hist. Av. Nov. Hisp. 55.

and it is generally the eighth or tenth of that month before they begin to build. These last are curious circumstances, which it is difficult to account for, unless by supposing, that incubation is retarded by a scarcity of suitable food in spring; berries and other fruit being their usual fare. In May, before the cherries are ripe, they are lean, and little else is found in their stomachs than a few shrivelled cedar berries, the refuse of the former season, and a few fragments of beetles and other insects, which do not appear to be their common food; but in June, while cherries and strawberries abound, they become extremely fat; and about the tenth or twelfth of that month, disperse over the country in pairs to breed; sometimes fixing on the cedar, but generally choosing the orchard for that purpose. The nest is large for the size of the bird, fixed in the forked or horizontal branch of an apple tree, ten or twelve feet from the ground; outwardly, and at bottom, is laid a mass of coarse dry stalks of grass, and the inside is lined wholly with very fine stalks of the same material. The eggs are three or four, of a dingy bluish white, thick at the great end, tapering suddenly, and becoming very narrow at the other; marked with small roundish spots of black of various sizes and shades; and the great end is of a pale dull purple tinge, marked likewise with touches of various shades of purple and black. About the last week in June the young are hatched, and are at first fed on insects and their larvæ; but as they advance in growth, on berries of various kinds. These facts I have myself been an eye witness to. The female, if disturbed, darts from the nest in silence to a considerable distance; no notes of wailing or lamentation are heard from either parent, nor are they even seen, notwithstanding you are in the tree examining the nest and young. These nests are less frequently found than many others; owing, not only to the comparatively few numbers of the birds, but to the remarkable muteness of the species. The season of love, which makes almost every other small bird musical, has no such effect on them; for they continue at that interesting period as silent as before.

This species is also found in Canada, where it is called *Recollet*, probably, as Dr. Latham supposes, from the colour and appearance of its crest resembling the hood of an order of friars of that denomination; it has also been met with by several of our voyagers on the north-west coast of America, and appears to have an extensive range.

Almost all the ornithologists of Europe persist in considering this bird as a variety of the European Chatterer (*A. garrulus*), with what justice or propriety, a mere comparison of the two will determine. The European species is very nearly twice the cubic bulk of ours; has the whole lower parts of an uniform dark vinous bay; the tips of the wings streaked with lateral bars of yellow; the nostrils covered with bristles;* the feathers on the chin loose and tufted; the wings black; and the markings of white and black on the sides of the head different from the American, which is as follows:—Length seven inches, extent eleven inches; head, neck, breast, upper part of the back, and wing-coverts, a dark fawn colour; darkest on the back, and brightest on the front; head ornamented with a high pointed almost upright crest; line from the nostril over the eye to the hind head velvety black, bordered above with a fine line of white, and another line of white passes from the lower mandible; chin black, gradually brightening into fawn colour, the feathers there lying extremely close; bill black, upper mandible nearly triangular at the base, without bristles, short, rounding at the point, where it is deeply notched; the lower scolloped at the tip and turning up; tongue, as in the rest of the genus, broad, thin, cartilaginous, and lacerated at the end; belly yellow; vent white; wings deep slate, except the two secondaries next the body, whose exterior vanes are of a fawn colour, and interior ones white; forming two whitish strips there, which are very conspicuous; rump and tail coverts pale light blue, tail the same, gradually deepening into black, and tipped for half an inch with rich yellow. Six or seven, and sometimes the whole nine, se-

* Turton.

condary feathers of the wings, are ornamented at the tips with small red oblong appendages, resembling red sealing-wax; these appear to be a prolongation of the shafts, and to be intended for preserving the ends, and consequently the vanes, of the quills from being broken and worn away, by the almost continual fluttering of the bird among thick branches of the cedar. The feathers of those birds which are without these appendages are uniformly found ragged on the edges; but smooth and perfect in those on whom the marks are full and numerous. These singular marks have been usually considered as belonging to the male alone, from the circumstance, perhaps, of finding female birds without them. They are, however, common to both male and female. Six of the latter are now lying before me, each with large and numerous clusters of eggs, and having the waxen appendages in full perfection. The young birds do not receive them until the second fall, when, in moulting time, they may be seen fully formed, as the feather is developed from its sheath. I have once or twice found a solitary one on the extremity of one of the tail feathers. The eye is of a dark blood colour; the legs and claws black; the inside of the mouth orange; gap wide; and the gullet capable of such distention as often to contain twelve or fifteen cedar berries, and serving as a kind of craw to prepare them for digestion. No wonder then that this gluttonous bird, with such a mass of food almost continually in his throat, should want both the inclination and powers for vocal melody, which would seem to belong to those only of less gross and voracious habits. The chief difference in the plumage of the male and female consists in the dulness of the tints of the latter, the inferior appearance of the crest, and the narrowness of the yellow bar on the tip of the tail.

Though I do not flatter myself with being able to remove that prejudice from the minds of foreigners, which has made them look on this bird, also, as a degenerate and not a distinct species from their own; yet they must allow that the change has been very great, very uniform, and universal, all over North America, where I have never heard that the European species has been

found; or even if it were, this would only show more clearly the specific difference of the two, by proving, that climate or food could never have produced these differences in either, when both retain them, though confined to the same climate.

But it is not only in the colour of their plumage that these two birds differ, but in several important particulars, in their manners and habits. The breeding place of the European species is absolutely unknown; supposed to be somewhere about the polar regions; from whence, in winter, they make different and very irregular excursions to different parts of Europe; seldom advancing farther south than the north of England, in lat. 54° N. and so irregularly, that many years sometimes elapse between their departure and reappearance; which in more superstitious ages has been supposed to portend some great national calamity. On the other hand, the American species inhabits the whole extensive range between Mexico and Canada, and perhaps much farther both northerly and southerly, building and rearing their young in all the intermediate regions, often in our gardens and orchards, within a few yards of our houses. Those of our fellow-citizens who have still any doubts, and wish to examine for themselves, may see beautiful specimens of both birds in the superb collection of Mr. Charles W. Peale of this city, whose magnificent museum is indeed a national blessing, and will be a lasting honour to his memory.

In some parts of the country they are called Crown-birds; in others Cherry-birds, from their fondness for that fruit. They also feed on ripe persimmons, small winter grapes, bird-cherries, and a great variety of other fruits and berries. The action of the stomach on these seeds and berries does not seem to injure their vegetative powers; but rather to promote them, by imbedding them in a calcareous case, and they are thus transported to and planted in various and distant parts by these little birds. In other respects, however, their usefulness to the farmer may be questioned; and in the general chorus of the feathered songsters they can scarcely be said to take a part. We must therefore rank them far below many more homely and minute warblers,

their neighbours, whom Providence seems to have formed, both as allies to protect the property of the husbandman from devouring insects, and as musicians to cheer him, while engaged in the labours of the field, with their innocent and delightful melody.

GENUS 35. LOXIA.* GROSBEAK.

SPECIES 1. *L. CARDINALIS*.

CARDINAL GROSBEAK.

[Plate XI.—Figs. 1 and 2.]

LINN. *Syst.* I, p. 300, No. 5.—*Le Gros-bec de Virginie*, BRISS.
Orn. III, p. 255, No. 17.—BUFF. III, p. 458, pl. 28. *Pl. Enl.*
37.—LATH. *Syn.* II, p. 118, No. 13.—*Cardinal*, BROWN'S *Jam.*
p. 647.—PEALE'S *Museum*, No. 5668.†

THIS is one of our most common cage birds; and is very generally known, not only in North America, but even in Europe; numbers of them having been carried over both to France and England, in which last country they are usually called Virginia Nightingales. To this name, Dr. Latham observes, "they are fully entitled," from the clearness and variety of their notes, which, both in a wild and domestic state, are very various and musical; many of them resemble the high notes of a fife, and are nearly as loud. They are in song from March to September, beginning at the first appearance of dawn, and repeating a favourite stanza, or passage, twenty or thirty times successively; sometimes with little intermission for a whole morning together; which, like a good story too often repeated, becomes at length tiresome and insipid. But the sprightly figure, and gaudy plumage of the Red-bird, his vivacity, strength of voice, and actual

* This genus, as constituted by Brisson and at present adopted, does not include the four species described under it by Wilson. The three first have been referred to the genus *Fringilla*, and the fourth, according to Temminck belongs to the genus *Pyrrhula* of Brisson.

† We add the following synonyms:—*Loxia cardinalis*, GMEL. *Syst.* I, p. 847. *Cardinal Grosbeak*, *Arct. Zool.* No. 210. CATESB. *Car.* I, t. p. 38.

variety of note, and the little expense with which he is kept, will always make him a favourite.

This species, like the Mocking-bird, is more numerous to the east of the great range of the Alleghany mountains; and inhabits from New England to Carthagen. Michaux the younger, son to the celebrated botanist, informed me, that he found this bird numerous in the Bermudas. In Pennsylvania and the northern states it is rather a scarce species; but through the whole lower parts of the southern states, in the neighbourhood of settlements, I found them much more numerous; their clear and lively notes, in the months of January and February, being, at that time, almost the only music of the season. Along the road sides and fences I found them hovering in half dozens together, associated with snow birds and various kinds of sparrows. In the northern states they are migratory; but in the lower parts of Pennsylvania they reside during the whole year, frequenting the borders of creeks and rivulets, in sheltered hollows covered with holly, laurel, and other evergreens. They love also to reside in the vicinity of fields of Indian corn, a grain that constitutes their chief and favourite food. The seeds of apples, cherries, and of many other sorts of fruit, are also eaten by them; and they are accused of destroying bees.

In the months of March and April the males have many violent engagements for their favourite females. Early in May in Pennsylvania they begin to prepare their nest, which is very often fixed in a hollow, cedar or laurel bush. Outwardly it is constructed of small twigs, tops of dry weeds, and slips of vine bark, and lined with stalks of fine grass. The female lays four eggs thickly marked all over with touches of brownish olive, on a dull white ground, as represented in the figure; and they usually raise two brood in the season. These birds are rarely raised from the nest for singing, being so easily taken in trap cages, and soon domesticated. By long confinement, and perhaps unnatural food, they are found to fade in colour, becoming of a pale whitish red. If well taken care of, however, they will live to a considerable age. There is at present in Mr. Peale's

museum, the stuffed skin of one of these birds, which is there said to have lived in a cage upward of twenty-one years.

The opinion which so generally prevails in England, that the music of the groves and woods of America is far inferior to that of Europe, I, who have a thousand times listened to both, cannot admit to be correct. We cannot with fairness draw a comparison between the depth of the forest in America, and the cultivated fields of England; because it is a well known fact, that singing birds seldom frequent the former, in any country. But let the latter places be compared with the like situations in the United States, and the superiority of song, I am fully persuaded, would justly belong to the western continent. The few of our song birds that have visited Europe extort admiration from the best judges. "The notes of the Cardinal Grosbeak," says Latham, "are almost equal to those of the Nightingale." Yet these notes, clear, and excellent as they are, are far inferior to those of the Wood Thrush; and even to those of the Brown Thrush or Thrasher. Our inimitable Mocking-bird is also acknowledged, by themselves, to be fully equal to the song of the Nightingale "in its whole compass." Yet these are not one-tenth of the number of our singing birds. Could these people be transported to the borders of our woods and settlements, in the month of May, about half an hour before sunrise, such a ravishing concert would greet their ear as they have no conception of.

The males of the Cardinal Grosbeak, when confined together in a cage, fight violently. On placing a looking-glass before the cage, the gesticulations of the tenant are truly laughable; yet with this he soon becomes so well acquainted, that, in a short time, he takes no notice whatever of it; a pretty good proof that he has discovered the true cause of the appearance to proceed from himself. They are hardy birds, easily kept, sing six or eight months in the year, and are most lively in wet weather. They are generally known by the names, Red-bird, Virginia Red-bird, Virginia Nightingale, and Crested Red-bird, to distinguish them from another beautiful species which is represented on the same plate.

I do not know that any successful attempts have been made to induce these birds to pair and breed in confinement; but I have no doubt of its practicability by proper management. Some months ago I placed a young unfledged Cow-bird (the *Fringilla pecoris* of Turton), whose mother, like the Cuckoo of Europe, abandons her eggs and progeny to the mercy and management of other smaller birds, in the same cage with a Red-bird, which fed and reared it with great tenderness. They both continue to inhabit the same cage, and I have hopes that the Red-bird will finish his pupil's education by teaching him his song.

I must here remark, for the information of foreigners, that the story told by Le Page du Pratz, in his History of Louisiana, and which has been so often repeated by other writers, that the Cardinal Grosbeak "collects together great hoards of maize and "buck-wheat, often as much as a bushel, which it artfully covers with leaves and small twigs, leaving only a small hole "for entrance into the magazine," is entirely fabulous.

This species is eight inches long, and eleven in extent; the whole upper parts are a dull dusky red, except the sides of the neck and head, which, as well as the whole lower parts, are bright vermillion; chin, front and lores, black; the head is ornamented with a high, pointed crest, which it frequently erects in an almost perpendicular position; and can also flatten at pleasure, so as to be scarcely perceptible; the tail extends three inches beyond the wings, and is nearly even at the end; the bill is of a brilliant coralline colour, very thick and powerful for breaking hard grain and seeds; the legs and feet a light clay colour (not blood red as Buffon describes them); iris of the eye dark hazel. The female is less than the male, has the upper parts of a brownish olive or drab colour, the tail, wings and tip of the crest excepted, which are nearly as red as those of the male; the lores, front and chin, are light ash; breast and lower parts a reddish drab; bill, legs and eyes, as those of the male; the crest is shorter and less frequently raised.

One peculiarity in the female of this species is, that she often sings nearly as well as the male. I do not know whether it be

owing to some little jealousy on this score or not, that the male, when both occupy the same cage, very often destroys the female.

SPECIES 2. *LOXIA BUDORCHII*

ROSE-BREASTED GROSBEEK.

[Plate XVII. — Figs. 2. Male.]

Female. Length 5.5. Wing 4.5. Tail 3.5. Culmen 1.0. Tarsus 1.5. Middle toe 1.0. Bill 1.5. Iris brown. Feet brown. Plumage brown. The male is similar to the female, but the bill is black. The female is more frequently observed; particularly in Fall when the berries of the sour gum are ripe; on the branches of which it eagerly feeds. Some of its trivial names would impart that it is also an inhabitant of Louisiana; but I have not heard of its being seen in any of the southern states. A gentleman of Madison, Connecticut, informed me, that he kept one of these birds for some considerable time in a cage, and observed that it frequently sang at night, and all night that its notes were extremely clear and mellow, and the sweeter of any bird with which he is acquainted.

The bird from which the figure on the plate was taken, was shot late in April, on the borders of a swamp, a few miles from Philadelphia. Another male of the same species was killed at the same time, considerably different in its markings; a proof that they do not acquire their full colours until at least the second spring or summer.

The Rose-breasted Grosbeak is eight inches and a half long, and thirteen inches in extent; the whole upper parts are black except the second row of wing coverts, which are broadly tipped

SPECIES 2. *LOXIA LUDOVICIANA*.

ROSE-BREASTED GROSBEAK.

[Plate XVII.—Fig. 2. Male.]

Loxia Ludoviciana, GMEL. *Syst.* I, p. 861.—*Red-breasted Grosbeak*, *Arct. Zool.* p. 350, No. 212.—*Red-breasted Finch*, *Id.* 372, No. 245.—*Le Rose gorge*, BUFF. III, 460.—*Gros-bec de la Louisiane*, *Pl. Enl.* 153, fig. 2.—LATH. *Syn.* II, 126.—PEALE'S *Museum*, No. 5806, male—5807, female—5806 A, male of one year old.

THIS elegant species is rarely found in the lower parts of Pennsylvania; in the state of New York, and those of New England, it is more frequently observed; particularly in Fall when the berries of the sour gum are ripe, on the kernels of which it eagerly feeds. Some of its trivial names would import, that it is also an inhabitant of Louisiana; but I have not heard of its being seen in any of the southern states. A gentleman of Middleton, Connecticut, informed me, that he kept one of these birds for some considerable time in a cage, and observed that it frequently sung at night, and all night; that its notes were extremely clear and mellow, and the sweetest of any bird with which he is acquainted.

The bird from which the figure on the plate was taken, was shot, late in April, on the borders of a swamp, a few miles from Philadelphia. Another male of the same species was killed at the same time, considerably different in its markings; a proof that they do not acquire their full colours until at least the second spring or summer.

The Rose-breasted Grosbeak is eight inches and a half long, and thirteen inches in extent; the whole upper parts are black except the second row of wing coverts, which are broadly tipped

with white; a spot of the same extends over the primaries, immediately below their coverts; chin, neck and upper part of the breast black; lower part of the breast, middle of the belly, and lining of the wings, a fine light carmine or rose-colour; tail forked, black, the three exterior feathers, on each side, white on their inner vanes for an inch or more from the tips; bill, like those of its tribe, very thick and strong, and pure white; legs and feet light blue; eyes hazel. The young male of the first spring has the plumage of the back variegated with light brown, white and black; a line of white extends over the eye; the rose colour also reaches to the base of the bill where it is speckled with black and white. The female is of a light yellowish flaxen colour, streaked with dark olive and whitish; the breast is streaked with olive, pale flaxen, and white; the lining of the wings is pale yellow; the bill more dusky than in the male, and the white on the wing less.

SPECIES 3: LOXIA CÆRULEA.

BLUE GROSBEAK.

[Plate XXIV.—Fig. 6.]

LINN. *Syst.* 304.—LATHAM, *Syn.* III, p. 116.—*Arct. Zool.* p. 351, No. 217.—CATESBY, *Car.* I, 39.—BUFFON, III, 454. *Pl. Enl.* 154.—PEALE'S *Museum*, No. 5826.

THIS solitary and retired species inhabits the warmer parts of America, from Guiana, and probably farther south,* to Virginia. Mr. Bartram also saw it during a summer's residence near Lancaster, Pennsylvania. In the United States, however, it is a scarce species; and having but few notes, is more rarely observed. Their most common note is a loud *chuck*; they have also at times a few low sweet toned notes. They are sometimes kept in cages in Carolina; but seldom sing in confinement. The individual represented in the plate was a very elegant specimen, in excellent order, though just arrived from Charleston, South Carolina. During its stay with me, I fed it on Indian corn, which it seemed to prefer, easily breaking with its powerful bill the hardest grains. They also feed on hemp seed, millet, and the kernels of several kinds of berries. They are timid birds, watchful, silent and active, and generally neat in their plumage. Having never yet met with their nest, I am unable at present to describe it.

The blue Grosbeak is six inches long, and ten inches in extent; lores and frontlet black; whole upper parts a rich purplish blue, more dull on the back, where it is streaked with dusky; greater wing coverts black, edged at the tip with bay; next superior row wholly chestnut; rest of the wing black, skirted with blue; tail forked, black, slightly edged with bluish, and sometimes mi-

* Latham, II, p. 116.

nutely tipped with white; legs and feet lead colour; bill a dusky bluish horn colour; eye large, full and black.

The female is of a dark drab colour, tinged with blue, and considerably lightest below. I suspect the males are subject to a change of colour during winter. The young, as usual with many other species, do not receive the blue colour until the ensuing spring; and till then very much resemble the female.

Latham makes two varieties of this species; the first wholly blue, except a black spot between the bill and eye; this bird inhabits Brazil, and is figured by Brisson, Orn. III, 321, No. 6, pl. 17, fig. 2. The other is also generally of a fine deep blue, except the quills, tail and legs, which are black; this is Edwards' "Blue Grosbeak from Angola," pl. 125; which Dr. Latham suspects to have been brought from some of the Brazilian settlements, and considers both as mere varieties of the first. I am sorry I cannot at present clear up this matter, but shall take some farther notice of it hereafter.

SPECIES 4. LOXIA ENUCLEATOR.

PINE GROSBEEK.

[Plate V.—Fig. 2.]

Loxia Eucleator, LINN. *Syst.* I, p. 299, 3.—*Le Dur-bec, ou Grosbec de Canada*, BUFFON, III, p. 457. *Pl. Enl.* 135, 1.—EDW. 123, 124.—LATH. *Syn.* III, p. 111, 5.—PEALE'S *Museum*, No. 5652.

THIS is perhaps one of the gayest plumaged land birds that frequent the inhospitable regions of the north, whence they are driven, as if with reluctance, by the rigours of winter, to visit Canada, and some of the northern and middle states; returning to Hudson's Bay so early as April. The specimen from which our drawing was taken, was shot on a cedar tree, a few miles to the north of Philadelphia, in the month of December; and a faithful resemblance of the original, as it then appeared, is exhibited in the plate. A few days afterwards, another bird of the same species was killed not far from Gray's ferry, four miles south of Philadelphia, which proved to be a female. In this part of the state of Pennsylvania, they are rare birds, and seldom seen. As they do not, to my knowledge, breed in any part of this state, I am unable, from personal observation, to speak of their manners or musical talents. Pennant says, they sing on their first arrival in the country round Hudson's Bay, but soon become silent; make their nest on trees, at a small height from the ground, with sticks, and line it with feathers. The female lays four white eggs, which are hatched in June. Foster observes, that they visit Hudson's Bay only in May, on their way to the north; and are not observed to return in the autumn; and that their food consists of birch-willow buds, and others of the same nature.*

* Phil. Trans. LXII, p. 402.

The Pine Grosbeak measures nine inches in length, and fourteen inches in extent; the head, neck, breast and rump is of a rich crimson, palest on the breast; the feathers on the middle of the back are centered with arrow-shaped spots of black, and skirted with crimson, which gives the plumage a considerable flush of red there; those on the shoulders are of a deep slate colour, partially skirted with red and light ash. The greater wing-coverts and next superior row are broadly tipped with white, and slightly tinged with reddish; wings and tail black, edged with light brown; tail considerably forked; lower part of the belly ash colour; vent feathers skirted with white, and streaked with black; legs glossy black; bill a brownish horn colour, very thick, short and hooked at the point; the upper mandible overhanging the lower considerably, approaching in its form to that of the parrot; base of the bill covered with recumbent hairs of a dark brown colour. The whole plumage, near the roots, as in most other birds, is of a deep bluish ash colour. The female was half an inch shorter, and answered nearly to the above description; only, those parts that in the male were crimson, were in her of a dirty yellowish colour. The female, according to Foster, referred to above, has those parts which in the male are red, more of an orange tint; and he censures Edwards for having represented the female of too bright a red. It is possible, that my specimen of the female might have been a bird of the first season, not come to its full colours. Those figured by Mr. Edwards* were both brought from Hudson's Bay, and appear to be the same with the one now before us, though his colouring of the female differs materially from his description.

If this, as Mr. Pennant asserts, be the same species with that of the eastern continent, it would seem to inhabit almost the whole extent of the arctic regions. It is found in the north of Scotland, where Pennant suspects it breeds. It inhabits Europe as far north as Dronthiem; is common in all the pine forests of Asia, in Siberia, and the north of Russia, is taken in autumn

* Edw. vol. III, p. 124.

about Petersburg, and brought to market in great numbers. It returns to Lapland in spring; is found in Newfoundland; and on the western coast of North America.*

Were I to reason from analogy, I would say, that from the great resemblance of this bird to the Purple-finch (*Fringilla purpurea*), it does not attain its full plumage until the second summer; and is subject to considerable change of colour in moulting, which may have occasioned all the differences we find concerning it in different authors. But this is actually ascertained to be the case; for Mr. Edwards saw two of these birds alive in London, in cages; the person in whose custody they were, said they came from Norway; that they had moulted their feathers, and were not afterwards so beautiful as they were at first. One of them, he says, was coloured very much like the Greenfinch (*Loxia Chloris*). The Purple-finch, though much smaller, has the rump, head, back and breast nearly of the same colour as the Pine Grosbeak, feeds in the same manner, on the same food, and is also subject to like changes of colour.

Since writing the above I have kept one of these Pine Grosbeaks, a male, for more than half a year. In the month of August those parts of the plumage which were red became of a greenish yellow, and continue so still. In May and June its song, though not so loud as some birds of its size, was extremely clear, mellow and sweet. It would warble out this for a whole morning together, and acquired several of the notes of a Redbird (*L. cardinalis*), that hung near it. It is exceedingly tame and familiar, and when it wants food or water utters a continual melancholy and anxious note. It was caught in winter near the North river, thirty or forty miles above New York.

* Pennant.

GENUS 35. CURVIROSTRA. CROSSBILL.

SPECIES 1. *C. AMERICANA*.*

AMERICAN CROSSBILL.

[Plate XXXI.—Fig. 1, *Male*.—Fig. 2, *Female*.†]

PEALE'S *Museum*, No. 5640.

ON first glancing at the bill of this extraordinary bird one is apt to pronounce it deformed and monstrous; but on attentively observing the use to which it is applied by the owner, and the dexterity with which he detaches the seeds of the pine tree from the cone, and from the husks that enclose them, we are obliged to confess on this as on many other occasions where we have judged too hastily of the operations of nature, that no other conformation could have been so excellently adapted to the purpose; and that its deviation from the common form, instead of being a defect or monstrosity, as the celebrated French naturalist insinuates, is a striking proof of the wisdom and kind superintending care of the great Creator.

This species is a regular inhabitant of almost all our pine forests situated north of 40°, from the beginning of September to the middle of April. It is not improbable that some of them remain during summer within the territory of the United States to breed. Their numbers must, however, be comparatively few, as I have never yet met with any of them in summer; though I lately took a journey to the Great Pine swamp beyond Pocano mountain, in Northampton county, Pennsylvania, in the month of May, expressly for that purpose; and ransacked for six or seven

* This is not a new species, as supposed by Wilson, but the *Loxia curvirostra*, LINN. Ed. 10, p. 171.

† This is an adult male; fig 1 is a young bird.

days the gloomy recesses of that extensive and desolate morass, without being able to discover a single Crossbill. In fall, however, as well as in winter and spring, this tract appears to be their favourite rendezvous; particularly about the head waters of the Lehigh, the banks of the Tobyhanna, Tunkhannock, and Bear creek, where I have myself killed them at these seasons. They then appear in large flocks, feeding on the seeds of the hemlock and white pine, have a loud, sharp, and not unmusical note; chatter as they fly; alight during the prevalence of deep snows before the door of the hunter, and around the house, picking off the clay with which the logs are plastered, and searching in corners where urine or any substance of a saline quality had been thrown. At such times they are so tame as only to settle on the roof of the cabin when disturbed, and a moment after descend to feed as before. They are then easily caught in traps; and will frequently permit one to approach so near as to knock them down with a stick. Those killed and opened at such times, are generally found to have the stomach filled with a soft greasy kind of earth or clay. When kept in a cage they have many of the habits of the Parrot; often climbing along the wires; and using their feet to grasp the cones in, while taking out the seeds.

This same species is found in Nova Scotia, and as far north as Hudson's bay, arriving at Severn river about the latter end of May; and, according to accounts, proceeding farther north to breed. It is added, that "they return at the first setting in of frost."*

Hitherto this bird has, as usual, been considered a mere *variety* of the European species; though differing from it in several respects; and being nearly one-third less; and although the singular conformation of the bill of these birds and their peculiarity of manners are strikingly different from those of the Grosbeaks, yet many, disregarding these plain and obvious discriminations, still continue to consider them as belonging to the genus *Loxia*; as if the particular structure of the bill should, in all cases *but*

* Pennant.

this, be the criterion by which to judge of a species; or perhaps conceiving themselves the wiser of the two, they have thought proper to associate together what *Nature* has, in the most pointed manner, placed apart.

In separating these birds, therefore, from the Grosbeaks, and classing them as a family by themselves, substituting the specific for the generic appellation, I have only followed the steps and dictates of that great Original, whose arrangements ought never to be disregarded by any who would faithfully copy her.

The Crossbills are subject to considerable changes of colour; the young males of the present species being, during the first season, olive yellow mixed with ash; then bright greenish yellow intermixed with spots of dusky olive; all of which yellow plumage becomes, in the second year, of a light red, having the edges of the tail inclining to yellow. When confined in a cage they usually lose the red colour at the first moulting, that tint changing to a brownish yellow, which remains permanent. The same circumstance happens to the Purple Finch and Pine Grosbeak, both of which, when in confinement, exchange their brilliant crimson for a motley garb of light brownish yellow; as I have had frequent opportunities of observing.

The male of this species, when in perfect plumage, is five inches and three quarters long, and nine inches in extent; the bill is a brown horn colour, sharp, and single edged towards the extremity, where the mandibles cross each other; the general colour of the plumage is a red-lead colour, brightest on the rump, generally intermixed on the other parts with touches of olive; wings and tail brown black, the latter forked, and edged with yellow; legs and feet brown; claws large, much curved, and very sharp; vent white, streaked with dark ash; base of the bill covered with recumbent down, of a pale brown colour; eye hazle.

The female is rather less than the male; the bill of a paler horn colour; rump, tail coverts and edges of the tail golden yellow; wings and tail dull brownish black; the rest of the plumage olive yellow mixed with ash; legs and feet as in the male. The

young males during the first season, as is usual with most other birds, very much resemble the female. In moulting, the males exchange their red for brownish yellow, which gradually brightens into red. Hence at different seasons they differ greatly in colour.

SPECIES 2. CURVIROSTRA LEUCOPTERA.

WHITE-WINGED CROSSBILL.

[Plate XXXI.—Fig. 3.]

TURTON, *Syst.* I, p. 515.*

THIS is a much rarer species than the preceding; though found frequenting the same places, and at the same seasons; differing, however, from the former in the deep black wings and tail, the large bed of white on the wing, the dark crimson of the plumage; and a less and more slender conformation of body. The bird represented in the plate was shot in the neighbourhood of the Great Pine swamp, in the month of September, by my friend Mr. Ainsley, a German naturalist, collector in this country for the Emperor of Austria. The individual of this species mentioned by Turton and Latham, had evidently been shot in moulting time. The present specimen was a male in full and perfect plumage.†

The White-winged Crossbill is five inches and a quarter long, and eight inches and a quarter in extent; wings and tail deep black, the former crossed with two broad bars of white; general colour of the plumage dark crimson, partially spotted with dusky; lores and frontlet pale brown; vent white, streaked with black; bill a brown horn colour, the mandibles crossing each other as in the preceding species, the lower sometimes bending to the right, sometimes to the left, usually to the left in the male, and to the right in the female of the *American Crossbill*. The

*We add the following synonymes.—*Loxia leucoptera*, GMEL. *Syst.* I, p. 844.—*Loxia falcirostra*, LATH. *Ind. Orn.* I, p. 371.—*White-winged Cross-bill*, LATH. *Syn.* III, p. 108. 2. *Id. Sup.* p. 148. *Arct. Zool.* II, No. 208.

†This is a mistake; it was a young male.

female of the present species will be introduced as soon as a good specimen can be obtained, with such additional facts relative to their manners as may then be ascertained.

GENUS 36. EMBERIZA. BUNTING.

BLACK-THROATED BUNTING.

SPECIES 1. *E. AMERICANA*.

[Plate III.—Fig. 2.]

Calandra pratensis, the *May Bird*, BARTRAM, p. 291.—*Arct. Zool.* 228.—*Emberiza Americana*, IND. ORN. p. 411, 42.—PEALE'S *Museum*, No. 5952.*

OF this bird I have but little to say. They arrive in Pennsylvania, from the south, about the middle of May; abound in the neighbourhood of Philadelphia; and seem to prefer level fields, covered with rye-grass, timothy, or clover, where they build their nest, fixing it in the ground, and forming it of fine dried grass. The female lays five white eggs, sprinkled with specks and lines of black. Like most part of their genus, they are nowise celebrated for musical powers. Their whole song consists of five notes, or, more properly, of two notes; the first repeated twice and slowly, the second thrice, and rapidly, resembling *chip, chip, che che che*. Of this ditty, such as it is, they are by no means parsimonious, for, from their first arrival, for the space of two or three months, every level field of grain or grass is perpetually serenaded with *chip, chip, che che che*. In their shape and manners they very much resemble the Yellow-Hammer of Britain (*E. citrinella*); like them they are fond of mounting to the top of some half-grown tree, and there chirruping for half an hour at a time. In travelling through different parts of New York and Pennsylvania, in spring and summer, wherever I came to level fields of deep grass, I have

* We add the following synonymes:—*Emberiza Americana*, GMEL. *Syst.* 1, p. 872.—LATH. *Syn.* 2, p. 197, pl. 44. *Fringilla flaricollis*, GMEL. *Syst.* 1, 926.

constantly heard these birds around me. In August they become mute, and soon after, that is, towards the beginning of September, leave us altogether.

The Black-throated Bunting is six inches and a half in length; the upper part of the head is of a dusky greenish yellow; neck dark ash; breast, inside shoulders of the wing, line over the eye and at the lower angle of the bill yellow; chin, and space between the bill and eye white; throat covered with a broad, oblong, somewhat heart-shaped patch of black, bordered on each side with white; back, rump and tail ferruginous, the first streaked with black; wings deep dusky, edged with a light clay colour; lesser coverts and whole shoulder of the wing bright bay; belly and vent dull white; bill light blue, dusky above, strong and powerful for breaking seeds; legs and feet brown; iris of the eye hazel. The female differs from the male in having little or no black on the breast, nor streak of yellow over the eye; beneath the eye she has a dusky streak, running in the direction of the jaw. In all those I opened the stomach was filled with various seeds, gravel, eggs of insects, and sometimes a slimy kind of earth or clay.

This bird has been figured by Latham, Pennant, and several others. The former speaks of a bird which he thinks is either the same, or nearly resembling it, that resides in summer in the country about Hudson's Bay, and is often seen associating in flights with the geese;* this habit, however, makes me suspect that it must be a different species; for while with us here the Black-throated Bunting is never gregarious; but is almost always seen singly, or in pairs, or, at most, the individuals of one family together.

* LATH. Syn. Suppl. p. 158.

SPECIES 2. *EMBERIZA ERYTHROPHTHALMA*.

TOWHE BUNTING.

[Plate X.—Fig. 5. Male.]

Fringilla erythrophthalma, LINN. *Syst.* p. 318, 6.—*Le Pinson de la Caroline*, BRISS. *Orn.* III, p. 169, 44.—BUFF. *Ois.* IV, p. 141.—LATH. II, p. 199, No. 43.—CATESB. *Car.* I, Pl. 34.—PEALE'S *Museum*, No. 5970.

THIS is a very common, but humble and inoffensive species, frequenting close sheltered thickets, where it spends most of its time in scratching up the leaves for worms, and for the larvæ and eggs of insects. It is far from being shy, frequently suffering a person to walk round the bush or thicket where it is at work, without betraying any marks of alarm; and when disturbed, uttering the notes *Towhè*, repeatedly. At times the male mounts to the top of a small tree, and chants his few simple notes for an hour at a time. These are loud, not unmusical, something resembling those of the Yellow-hammer of Britain, but more mellow, and more varied. He is fond of thickets with a southern exposure, near streams of water, and where there is plenty of dry leaves; and is found, generally, over the whole United States. He is not gregarious, and you seldom see more than two together. About the middle or twentieth of April they arrive in Pennsylvania, and begin building about the first week in May. The nest is fixed on the ground among the dry leaves, near, and sometimes under, a thicket of briars, and is large and substantial. The outside is formed of leaves and pieces of grape-vine bark, and the inside of fine stalks of dry grass, the cavity completely sunk beneath the surface of the ground, and *sometimes* half covered above with dry grass or hay. The eggs are usually five, of a pale flesh colour, thickly marked with specks

of rufous, most numerous near the great end (see fig. 6). The young are produced about the beginning of June; and a second brood commonly succeeds in the same season. This bird rarely winters north of the state of Maryland; retiring from Pennsylvania to the south about the twelfth of October. Yet in the middle districts of Virginia, and thence south to Florida, I found it abundant during the months of January, February and March. Its usual food is obtained by scratching up the leaves; it also feeds, like the rest of its tribe, on various hard seeds and gravel; but rarely commits any depredations on the harvest of the husbandman; generally preferring the woods, and traversing the bottom of fences sheltered with briars. He is generally very plump and fat; and when confined in a cage soon becomes familiar. In Virginia he is called the Bulfinch; in many places the Towhe-bird; in Pennsylvania the Chewink, and by others the Swamp Robin. He contributes a little to the harmony of our woods in spring and summer; and is remarkable for the cunning with which he conceals his nest. He shows great affection for his young; and the deepest marks of distress on the appearance of their mortal enemy the black snake.

The specific name which Linnæus has bestowed on this bird is deduced from the colour of the iris of its eye, which, in those that visit Pennsylvania, is dark red. But I am suspicious that this colour is not permanent, but subject to a periodical change. I examined a great number of these birds in the month of March, in Georgia, every one of which had the iris of the eye *white*. Mr. Abbot of Savannah assured me, that at this season, every one of these birds he shot had the iris white, while at other times it was red; and Mr. Elliot, of Beaufort, a judicious naturalist, informed me, that in the month of February he killed a Towhe Bunting with one eye red and the other white! It should be observed that the iris of the young bird's eye is of a chocolate colour, during its residence in Pennsylvania; perhaps this may brighten into a white during winter, and these may have been all birds of the preceding year, which had not yet received the full colour of the eye.

The Towhe Bunting is eight inches and a half long, and eleven broad; above black, which also descends rounding on the breast, the sides of which are bright bay, spreading along under the wings; the belly is white, the vent pale rufous; a spot of white marks the wing just below the coverts, and another a little below that extends obliquely across the primaries; the tail is long, nearly even at the end; the three exterior feathers white for an inch or so from the tips, the outer one wholly white, the middle ones black; the bill is black; the legs and feet a dirty flesh colour, and strong for scratching up the ground. The female differs in being of a light reddish brown in those parts where the male is black; and in having the bill more of a light horn colour.

EMBERIZA ERYTHROPTHALMA.

TOWHE BUNTING.

[Plate LIII.—Fig. 5. Female.]

TURT. *Syst.* p. 534.—PEALE'S *Museum*, No. 5970.

THIS bird differs considerably from the male in colour; and has, if I mistake not, been described as a distinct species by European naturalists, under the appellation of the "*Rusty Bunting*." The males of this species, arrive several days sooner than the females. In one afternoon's walk through the woods, on the twenty-third of April, I counted more than fifty of the former, and did not observe any of the latter, though I made a very close search for them. This species frequents, in great numbers, the barrens covered with shrub oaks; and inhabits even to the tops of our mountains. They are almost perpetually scratching among the fallen leaves, and feed chiefly on worms, beetles and gravel. They fly low, flirting out their broad white-streaked tail, and uttering their common note *Towhè*. They build always on the ground, and raise two broods in the season. For a particular account of the manners of this species, see our history of the male.

The female Towhe is eight inches long, and ten inches in extent; iris of the eye a deep blood colour; bill black; plumage above, and on the breast, a dark reddish drab, reddest on the head and breast; sides under the wings light chestnut; belly white; vent yellow ochre; exterior vanes of the tertials white; a small spot of white marks the primaries immediately below their coverts, and another slighter streak crosses them in a slanting direction; the three exterior tail feathers are tipped with white; the legs and feet flesh-coloured.

This species seems to have a peculiar dislike to the sea coast, as in the most favourable situations, in other respects, within several miles of the sea, it is scarcely ever to be met with. Scarcity of its particular kinds of a favourite food in such places may probably be the reason; as it is well known that many kinds of insects, on the larvæ of which it usually feeds, carefully avoid the neighbourhood of the sea.

SPECIES 3. *EMBERIZA ORYZIVORA*.

RICE BUNTING.

[Plate XII.—Figs. 1 and 2.]

Emberiza oryzivora, LINN. *Syst. p.* 311, 16.—*Le Ortolan de la Caroline*, BRISS. *Orn.* III, *p.* 282, 8, *pl.* 15, *fig.* 3. *Pl. Enl.* 388, *fig.* 1.—*L'Agripenne, ou L'Ortolan de Riz.* BUFF. *Ois.* IV, *p.* 337.—*Rice-bird*, CATESB. *Car.* I, *pl.* 14.—EWD. *pl.* 2.—LATHAM II, *p.* 188, *No.* 25.—PEALE'S *Museum*, *No.* 6026.

THIS is the *Boblink* of the eastern and northern states, and the *Rice* and *Reed-bird* of Pennsylvania and the southern states. Though small in size, he is not so in consequence; his coming is hailed by the sportsman with pleasure; while the careful planter looks upon him as a devouring scourge, and worse than a plague of locusts. Three good qualities, however, entitle him to our notice, particularly as these three are rarely found in the same individual;—his plumage is beautiful, his song highly musical, and his flesh excellent. I might also add, that the immense range of his migrations, and the havoc he commits are not the least interesting parts of his history.

The winter residence of this species I suppose to be from Mexico to the mouth of the Amazon, from whence in hosts innumerable he regularly issues every spring, perhaps to both hemispheres, extending his migrations northerly as far as the banks of the Illinois and the shores of the St. Lawrence. Could the fact be ascertained, which has been asserted by some writers, that the emigration of these birds was altogether unknown in this part of the continent, previous to the introduction of rice plantations, it would certainly be interesting. Yet, why should these migrations reach at least a thousand miles beyond those places where rice is now planted; and this not in occasional excursions,

but regularly to breed, and rear their young, where rice never was, and probably never will be cultivated? Their so recent arrival on this part of the continent I believe to be altogether imaginary, because, though there were not a single grain of rice cultivated within the United States, the country produces an exuberance of food of which they are no less fond. Insects of various kinds, grubs, may-flies and caterpillars, the young ears of Indian corn, and the seeds of the wild oats, or, as it is called in Pennsylvania, reeds, (the *Zizania aquatica* of Linnæus) which grows in prodigious abundance along the marshy shores of our large rivers, furnish, not only them, but millions of Rail, with a delicious subsistence for several weeks. I do not doubt, however, that the introduction of rice, but more particularly the progress of agriculture in this part of America, has greatly increased their numbers, by multiplying their sources of subsistence fifty fold within the same extent of country.

In the month of April, or very early in May, the Rice Bunting, male and female, in the dresses in which they are figured on the plate, arrive within the southern boundaries of the United States; and are seen around the town of Savannah, in Georgia, about the fourth of May, sometimes in separate parties of males and females; but more generally promiscuously. They remain there but a short time; and about the twelfth of May make their appearance in the lower parts of Pennsylvania, as they did at Savannah. While here the males are extremely gay and full of song; frequenting meadows, newly ploughed fields, sides of creeks, rivers, and watery places, feeding on may-flies and caterpillars, of which they destroy great quantities. In their passage, however, through Virginia at this season, they do great damage to the early wheat and barley, while in its milky state. About the twentieth of May they disappear on their way to the north. Nearly at the same time they arrive in the state of New York, spread over the whole New England states as far as the river St. Lawrence from lake Ontario to the sea; in all of which places north of Pennsylvania they remain during the summer, building, and rearing their young. The

nest is fixed on the ground, generally in a field of grass; the outside is composed of dry leaves and coarse grass, the inside is lined with fine stalks of the same, laid in considerable quantity. The female lays five eggs, of a bluish white, marked with numerous irregular spots of blackish brown. The song of the male, while the female is sitting, is singular, and very agreeable. Mounting and hovering on wing, at a small height above the field, he chants out such a jingling medley of short variable notes, uttered with such seeming confusion and rapidity, and continued for a considerable time, that it appears as if half a dozen birds of different kinds were all singing together. Some idea may be formed of this song by striking the high keys of a piano forte at random, singly, and quickly, making as many sudden contrasts of high and low notes as possible. Many of the tones are, in themselves, charming; but they succeed each other so rapidly that the ear can hardly separate them. Nevertheless the general effect is good; and when ten or twelve are all singing on the same tree, the concert is singularly pleasing. I kept one of these birds for a long time, to observe its change of colour. During the whole of April, May, and June, it sang almost continually. In the month of June the colour of the male begins to change, gradually assimilating to that of the female, and before the beginning of August it is difficult to distinguish the one from the other, both being then in the dress of fig. 2. At this time, also, the young birds are so much like the female, or rather like both parents, and the males so different in appearance from what they were in spring, that thousands of people in Pennsylvania, to this day, persist in believing them to be a different species altogether. While others allow them indeed to be the same, but confidently assert that they are all females—none but females, according to them, returning in the fall; what becomes of the males they are totally at a loss to conceive. Even Mr. Mark Catesby, who resided for years in the country they inhabit, and who, as he himself informs us, examined by dissection great numbers of them in the fall, and repeated his experiment the succeeding year, lest he should have

been mistaken, declares that he uniformly found them to be females. These assertions must appear odd to the inhabitants of the eastern states, to whom the change of plumage in these birds is familiar, as it passes immediately under their eye; and also to those, who like myself, have kept them in cages, and witnessed their gradual change of colour. That accurate observer, Mr. William Bartram, appears, from the following extract, to have taken notice of, or at least suspected this change of colour in these birds more than forty years ago. "Being in Charleston," says he, "in the month of June, I observed a cage full of Rice-birds, that is of the yellow or female colour, who were very merry and vociferous, having the same variable music with the pied or male bird, which I thought extraordinary, and observing it to the gentleman, he assured me that they were all of the male kind, taking the preceding spring; but had changed their colour, and would be next spring of the colour of the pied, thus changing colour with the seasons of the year. If this is really the case, it appears they are both of the same species intermixed, spring and fall." Without, however, implicating the veracity of Catesby, who, I have no doubt, believed as he wrote, a few words will easily explain why he was deceived. The internal organization of undomesticated birds of all kinds, undergoes a remarkable change, every spring and summer; and those who wish to ascertain this point by dissection will do well to remember, that in this bird those parts that characterize the male are, in autumn, no larger than the smallest pin's head, and in young birds of the first year can scarcely be discovered; though in spring their magnitude in each is at least one hundred times greater. To an unacquaintance with this extraordinary circumstance I am persuaded has been owing the mistake of Mr. Catesby that the females only return in the fall; for the same opinion I long entertained myself, till a more particular examination showed me the source of my mistake. Since that, I have opened and examined many hundreds of these birds, in the months of September and October, and, on the whole, have found about as many males as

females among them. The latter may be distinguished from the former by being of a rather more shining yellow on the breast and belly; it is the same with the young birds of the first season.

During the breeding season they are dispersed over the country; but as soon as the young are able to fly, they collect together in great multitudes, and pour down on the oat fields of New England like a torrent, depriving the proprietors of a good tithe of their harvest; but in return often supply his table with a very delicious dish. From all parts of the north and western regions they direct their course towards the south; and about the middle of August revisit Pennsylvania on their rout to winter quarters. For several days they seem to confine themselves to the fields and uplands; but as soon as the seeds of the reed are ripe they resort to the shores of the Delaware and Schuylkill in multitudes; and these places, during the remainder of their stay, appear to be their grand rendezvous. The reeds, or wild oats, furnish them with such abundance of nutritious food, that in a short time they become extremely fat; and are supposed by some of our epicures, to be equal to the famous Ortolans of Europe. Their note at this season is a single *chink*, and is heard over head, with little intermission, from morning to night. These are halcyon days for our gunners of all descriptions, and many a lame and rusty gun barrel is put in requisition for the sport. The report of musketry along the reedy shores of the Schuylkill and Delaware is almost incessant, resembling a running fire. The markets of Philadelphia, at this season, exhibits proofs of the prodigious havoc made among these birds; for almost every stall is ornamented with strings of Reed-birds. This sport, however, is considered inferior to that of *Rail-shooting*, which is carried on at the same season and places with equal slaughter. Of this, as well as of the Rail itself, we shall give a particular account in its proper place.

Whatever apology the people of the eastern and southern states may have for the devastation they spread among the Rice and Reed-Birds, the Pennsylvanians, at least those living in

this part of it, have little to plead in justification, but the pleasure of destruction, or the savoury dish they furnish their tables with; for the oat harvest is generally secured before the great body of these birds arrive, the Indian corn too ripe and hard, and the reeds seem to engross all their attention. But in the states south of Maryland, the harvest of early wheat and barley in spring, and the numerous plantations of Rice in fall, suffer severely. Early in October, or as soon as the nights begin to set in cold, they disappear from Pennsylvania, directing their course to the south. At this time they swarm among the Rice fields; and appear in the island of Cuba in immense numbers, in search of the same delicious grain. About the middle of October they visit the island of Jamaica in equal numbers, where they are called *Butter-birds*. They feed on the seed of the Guinea grass, and are also in high esteem there for the table.*

Thus it appears, that the regions north of the fortieth degree of latitude are the breeding places of these birds; that their migrations northerly are performed from March to May, and their return southerly from August to November; their precise winter quarters, or farthest retreat southerly, is not exactly known.

The Rice Bunting is seven inches and a half long, and eleven and a half in extent; his spring dress is as follows; upper part of the head, wings, tail and sides of the neck, and whole lower parts black; the feathers frequently skirted with brownish yellow as he passes into the colours of the female; back of the head a cream colour; back black, seamed with brownish yellow; scapulars pure white, rump and tail coverts the same; lower part of the back bluish white; tail formed like those of the Woodpecker genus, and often used in the same manner, being thrown in to support it while ascending the stalks of the reed; this habit of throwing in the tail it retains even in the cage; legs a brownish flesh colour; hind heel very long; bill a bluish horn colour; eye hazel; see fig. 1. In the month of June this plumage gradually changes to a brownish yellow, like that of the female, fig. 2, which has the back streaked with brownish black; whole

* Rennel's Hist. Jam.

lower parts dull yellow; bill reddish flesh colour; legs and eyes as in the male. The young birds retain the dress of the female until the early part of the succeeding spring; the plumage of the female undergoes no material change of colour.

SPECIES 4. EMBERIZA PECORIS.

COW BUNTING.*

[Plate XVIII.—Figs. 1, 2, & 3.]

Le Brunet, BUFF. IV, 138.—*Le Pinçon de Virginie*, BRISS. III, 165.—*Cowpen-bird*, CATESB. I, 34.—LATH. II, 269.—*Arct. Zool.* II, p. 371, No. 241.—*Sturnus stercorarius*, BARTRAM, p. 291.—PEALE'S Museum, No. 6378, male—6379, female.†

THERE is one striking peculiarity in the works of the great Creator, which becomes more amazing the more we reflect on it; namely, that he has formed no species of animals so minute, or obscure, that are not invested with certain powers and peculiarities, both of outward conformation and internal faculties, exactly suited to their pursuits, sufficient to distinguish them from all others; and forming for them a character solely and exclusively their own. This is particularly so among the feathered race. If there be any case where these characteristic features are not evident, it is owing to our want of observation; to our little intercourse with that particular tribe; or to that contempt for inferior animals and all their habitudes which is but too

* The American Cuckoo (*Cuculus Carolinensis*) is by many people called the Cow-bird, from the sound of its notes resembling the words *cow, cow*. This bird builds its own nest very artlessly in a cedar or an apple tree, and lays four greenish blue eggs, which it hatches, and rears its young with great tenderness.

† Prince Musignano quotes the following Synonymes:—*Fringilla pecoris*, GMEL. LATH. female and young.—*Oriolus fuscus*, GMEL. adult male.—*Oriolus minor*, GMEL. species, No. 46, LATH. adult male.—*Sturnus obscurus*, GMEL. adult male.—*Sturnus junceti*, LATH. adult male.—*Troupiale de la Caroline*, BUFF. Pl. Enl. 606, fig. 1, adult male. This figure is, no doubt, intended for this bird, although the bill is incorrect.—BRISSON calls it *Fringilla Virginiana*, VIEILLLOT, *Passerina pecoris*.

general, and which bespeaks a morose, unfeeling and unreflecting mind. These peculiarities are often surprising, always instructive where understood, and (as in the subject of our present chapter) at least amusing, and worthy of being farther investigated.

The most remarkable trait in the character of this species is the unaccountable practice it has of dropping its eggs into the nests of other birds, instead of building and hatching for itself; and thus entirely abandoning its progeny to the care and mercy of strangers. More than two thousand years ago it was well known, in those countries where the bird inhabits, that the Cuckoo of Europe (*Cuculus canorus*) never built herself a nest, but dropped her eggs in the nests of other birds; but among the thousands of different species that spread over that and other parts of the globe, no other instance of the same uniform habit has been found to exist, until discovered in the bird now before us. Of the reality of the former there is no doubt; it is known to every schoolboy in Britain; of the truth of the latter I can myself speak with confidence, from personal observation, and from the testimony of gentlemen, unknown to each other, residing in different and distant parts of the United States. The circumstances by which I became first acquainted with this peculiar habit of the bird are as follow.

I had, in numerous instances, found in the nests of three or four particular species of birds, one egg, much larger and differently marked from those beside it; I had remarked that these odd looking eggs were all of the same colour, and marked nearly in the same manner, in whatever nest they lay; though frequently the eggs beside them were of a quite different tint; and I had also been told, in a vague way, that the Cow-bird laid in other birds' nests. At length I detected the female of this very bird in the nest of the Red-eyed Flycatcher, which nest is very small, and very singularly constructed; suspecting her purpose, I cautiously withdrew without disturbing her; and had the satisfaction to find, on my return, that the egg which she had just dropt corresponded as nearly as eggs of the same species usually

do, in its size, tint and markings to those formerly taken notice of. Since that time I have found the young Cow Bunting, in many instances, in the nests of one or other of these small birds; I have seen these last followed by the young Cow-bird calling out clamorously for food, and often engaged in feeding it; and I have now, in a cage before me, a very fine one which six months ago I took from the nest of the Maryland Yellow-throat, and from which the figures of the young bird, and male Cow-bird in the plate were taken; the figure in the act of feeding it is the female Maryland Yellow-throat, in whose nest it was found. I claim, however, no merit for a discovery not originally my own, these singular habits having long been known to people of observation resident in the country, whose information, in this case, has preceded that of all our school philosophers and closet naturalists; to whom the matter has till now been totally unknown.

About the twenty-fifth of March, or early in April, the Cow-pen-bird makes his first appearance in Pennsylvania from the south, sometimes in company with the Red-winged Blackbird, more frequently in detached parties, resting early in the morning, an hour at a time, on the tops of trees near streams of water, appearing solitary, silent and fatigued. They continue to be occasionally seen, in small solitary parties, particularly along creeks and banks of rivers, so late as the middle of June; after which we see no more of them until about the beginning or middle of October, when they re-appear in much larger flocks, generally accompanied by numbers of the Red-wings; between whom and the present species there is a considerable similarity of manners, dialect, and personal resemblance. In these aerial voyages, like other experienced navigators, they take advantage of the direction of the wind; and always set out with a favourable gale. My venerable and observing friend, Mr. Bartram, writes me on the thirteenth of October, as follows.—“The day before
“yesterday, at the height of the north-east storm, prodigious
“numbers of the Cow-pen birds came by us, in several flights
“of some thousands in a flock; many of them settled on trees in

“ the garden to rest themselves; and then resumed their voyage southward. There were a few of their *cousins*, the Red-wings, “ with them. We shot three, a male and two females.”

From the early period at which these birds pass in the spring, it is highly probable that their migrations extend very far north. Those which pass in the months of March and April can have no opportunity of depositing their eggs here, there being not more than one or two of our small birds which build so early. Those that pass in May and June, are frequently observed loitering singly about solitary thickets, reconnoitering, no doubt, for proper nurses, to whose care they may commit the hatching of their eggs, and the rearing of their helpless orphans. Among the birds selected for this duty are the following, all of which are figured and described in this and the preceding volume;— the Blue-bird, which builds in a hollow tree; the Chipping Sparrow, in a cedar bush; the Golden-crowned Thrush, on the ground, in the shape of an oven; the Red-eyed Flycatcher, a neat pensile nest, hung by the two upper edges on a small sapling, or drooping branch; the Yellow-bird in the fork of an alder; the Maryland Yellow-throat on the ground at the roots of briar bushes; the White-eyed Flycatcher, a pensile nest on the bending of a smilax vine; and the small Blue Gray Flycatcher, also a pensile nest, fastened to the slender twigs of a tree, sometimes at the height of fifty or sixty feet from the ground. The three last mentioned nurses are represented on the same plate with the bird now under consideration. There are, no doubt, others to whom the same charge is committed; but all these I have myself met with acting in that capacity.

Among these the Yellow-throat, and the Red-eyed Flycatcher, appear to be particular favourites; and the kindness and affectionate attention which these two little birds seem to pay to their nurslings, fully justify the partiality of the parents.

It is well known to those who have paid attention to the manners of birds, that after their nest is fully finished, a day or two generally elapses before the female begins to lay. This delay is in most cases necessary to give firmness to the yet damp ma-

terials and allow them time to dry. In this state it is sometimes met with, and laid in by the Cow Bunting; the result of which I have invariably found to be the desertion of the nest by its rightful owner, and the consequent loss of the egg thus dropped in it by the intruder. But when the owner herself has begun to lay, and there are one or more eggs in the nest before the Cow Bunting deposits hers, the attachment of the proprietor is secured, and remains unshaken until incubation is fully performed, and the little stranger is able to provide for itself.

The well known practice of the young Cuckoo of Europe in turning out all the eggs and young which it feels around it, almost as soon as it is hatched, has been detailed in a very satisfactory and amusing manner, by the amiable Dr. Jenner,* who has since risen to immortal celebrity, in a much nobler pursuit; and to whose genius and humanity the whole human race are under everlasting obligations. In our Cow Bunting, though no such habit has been observed, yet still there is something mysterious in the disappearance of the nurse's own eggs soon after the foundling is hatched, which happens regularly before all the rest. From twelve to fourteen days is the usual time of incubation with our small birds; but although I cannot exactly fix the precise period requisite for the egg of the Cow Bunting, I think I can say almost positively, that it is a day or two less than the shortest of the above mentioned spaces! In this singular circumstance we see a striking provision of the Deity; for did this egg require a day or two more instead of so much less than those among which it has been dropped, the young it contained would in every instance most inevitably perish; and thus in a few years the whole species must become extinct. On the first appearance of the young Cow Bunting, the parent being frequently obliged to leave the nest to provide sustenance for the foundling, the business of incubation is thus necessarily interrupted; the disposition to continue it abates; nature has now given a new direction to the zeal of the parent, and the remaining eggs, within a day or two at most, generally

* See Philosophical Transactions for 1788, Part II.

disappear. In some instances, indeed, they have been found on the ground near, or below, the nest; but this is rarely the case.

I have never known more than one egg of the Cow Bunting dropped in the same nest. This egg is somewhat larger than that of the Blue-bird, thickly sprinkled with grains of pale brown on a dirty white ground. It is of a size proportionable to that of the bird.

So extraordinary and unaccountable is this habit, that I have sometimes thought it might not be general among the whole of this species in every situation; that the extreme heat of our summers, though suitable enough for their young, might be too much for the comfortable residence of the parents; that, therefore, in their way to the north, through our climate, they were induced to secure suitable places for their progeny; and that in the regions where they more generally pass the summer, they might perhaps build nests for themselves, and rear their own young, like every other species around them. On the other hand, when I consider that many of them tarry here so late as the middle of June, dropping their eggs, from time to time, into every convenient receptacle; that in the states of Virginia, Maryland, Delaware, New Jersey and Pennsylvania, they uniformly retain the same habits; and, in short, that in all these places I have never yet seen or heard of their nest;—reasoning from these facts, I think I may safely conclude, that they never build one; and that in those remote northern regions their manners are the same as we find them here.

What reason Nature may have for this extraordinary deviation from her general practice, is, I confess, altogether beyond my comprehension. There is nothing singular to be observed in the anatomical structure of the bird that would seem to prevent or render it incapable of incubation. The extreme heat of our climate is probably one reason why in the months of July and August they are rarely to be seen here. Yet we have many other migratory birds that regularly pass through Pennsylvania to the north, leaving a few residents behind them; who, without exception, build their own nests and rear their own young. This

part of the country also abounds with suitable food, such as they usually subsist on. Many conjectures indeed might be formed as to the probable cause; but all of them, that have occurred to me, are unsatisfactory and inconsistent. Future, and more numerous observations, made with care, particularly in those countries where they most usually pass the summer, may throw more light on this matter; till then we can only rest satisfied with the reality of the fact.

This species winters regularly in the lower parts of North and South Carolina, and Georgia; I have also met with them near Williamsburg, and in several other parts of Virginia. In January, 1809, I observed strings of them for sale in the market of Charleston, South Carolina. They often frequent corn and rice-fields in company with their cousins, as Mr. Bartram calls them, the Red-winged Blackbirds; but are more commonly found accompanying the cattle, feeding on the seeds, worms, &c. which they pick up amongst the fodder and from the excrements of the cattle, which they scratch up for this purpose. Hence they have pretty generally obtained the name of *Cow-pen birds*, *Cow-birds*, or *Cow Blackbirds*. By the naturalists of Europe they have hitherto been classed with the Finches; though improperly, as they have no family resemblance to that tribe sufficient to justify that arrangement. If we are to be directed by the conformation of their bill, nostrils, tongue, and claws, we cannot hesitate a moment in classing them with the Red-winged Blackbirds, *Oriolus Phæniceus*; not, however, as *Orioles*, but as *Buntings*, or some new intermediate genus; the notes or dialect of the Cow Bunting and those of the Red-wings, as well as some other peculiarities of voice and gesticulation, being strikingly similar.

Respecting this extraordinary bird I have received communications from various quarters, all corroborative of the foregoing particulars. Among these is a letter from Dr. Potter of Baltimore, which, as it contains some new and interesting facts, and several amusing incidents, illustrative of the character of the bird, I shall with pleasure lay before the reader, apologizing to

the obliging writer for a few unimportant omissions which have been anticipated in the preceding pages.

“I regret exceedingly that professional avocations have put it out of my power to have replied earlier to your favour of the nineteenth of September; and although I shall not now reflect all the light you desire, a faithful transcript from memoranda noted at the moment of observation, may not be altogether uninteresting.

“The *Fringilla pecoris*, is generally known in Maryland by the name of the Cow Blackbird; and none but the naturalist view it as a distinct species. It appears about the last of March, or first week in April; though sometimes a little earlier when the spring is unusually forward. It is less punctual in its appearance than many other of our migratory birds.

“It commonly remains with us till about the last of October; though unusually cold weather sometimes banishes it much earlier. It however sometimes happens that a few of them remain with us all winter, and are seen hovering about our barns and farm-yards when straitened for sustenance by snow or hard frost. It is remarkable that in some years I have not been able to discover one of them during the months of July and August; when they have suddenly appeared in September in great numbers. I have noticed this fact always immediately after a series of very hot weather, and then only. The general opinion is that they then retire to the deep recesses of the shady forest; but if this had been the fact, I should probably have discovered them in my rambles in every part of the woods. I think it more likely that they migrate further north till they find a temperature more congenial to their feelings, or find a richer repast in following the cattle in a better pasture.*

* “It may not be improper to remark here, that the appearance of this bird in spring is sometimes looked for with anxiety by the farmers. If the horned cattle happen to be diseased in spring they ascribe it to worms, and consider the pursuit of the birds as an unerring indication of the necessity of medicine. Although this hypothesis of the worms infesting the cattle so as

“ In autumn we often find them congregated with the marsh
“ Blackbirds, committing their common depredations upon the
“ ears of the Indian corn; and at other seasons the similarity of
“ their pursuits in feeding introduces them into the same com-
“ pany. I could never observe that they would keep the com-
“ pany of any other bird.

“ The Cow-pen finch differs moreover in another respect from
“ all the birds with which I am acquainted. After an observance
“ of many years I could never discover any thing like *pairing* or
“ a mutual attachment between the sexes. Even in the season of
“ love, when other birds are separated into pairs, and occupied
“ in the endearing office of providing a receptacle for their off-
“ spring, the Fringillæ are seen feeding in odd as well as even
“ numbers, from one to twenty, and discovering no more disposi-
“ tion towards perpetuating their species than birds of any other
“ species at other seasons, excepting a promiscuous concubinage
“ which pervades the whole tribe. When the female separates
“ from the company, her departure is not noticed; no gallant
“ partner accompanies her, nor manifests any solicitude in her
“ absence; nor is her return greeted by that gratulatory tender-
“ ness that so eminently characterizes the males of other birds.
“ The male proffers the same civilities to any female indiscrim-
“ inately, and they are reciprocated accordingly, without exci-
“ ting either resentment or jealousy in any of the party. This
“ want of sexual attachment is not inconsistent with the gene-
“ ral economy of this singular bird; for as they are neither their
“ own architect, nor nurse of their own young, the degree of
“ attachment that governs others would be superfluous.

“ to produce much disease is problematical, their superabundance at this sea-
“ son cannot be denied. The larvæ of several species are deposited in the ve-
“ getables when green, and the cattle are fed on them as fodder in winter.
“ This furnishes the principal inducement for the bird to follow the cattle in
“ spring, when the aperient effects of the green grasses evacuates great num-
“ bers of worms. At this season the *pecoris* often stuffs its crop with them till
“ it can contain no more. There are several species, but the most numerous
“ is a small white one similar to, if not the same as, the *ascaris* of the human
“ species.”

“That the *Fringilla* never builds a nest for itself you may
“assert without the hazard of a refutation. I once offered a pre-
“mium for the nest, and the negroes in the neighbourhood
“brought me a variety of nests, but they were always traced
“to some other bird. The time of depositing their eggs is from
“the middle of April to the last of May, or nearly so; corres-
“ponding with the season of laying observed by the small birds,
“on whose property it encroaches. It never deposits but one
“egg in the same nest, and this is generally after the rightful
“tenant begins to deposit hers, but never I believe after she has
“commenced the process of incubation. It is impossible to say
“how many they lay in a season, unless they could be watched
“when confined in an aviary.

“By a minute attention to a number of these birds when they
“feed in a particular field in the laying season, the deportment
“of the female, when the time of laying draws near, becomes
“particularly interesting. She deserts her associates, assumes
“a drooping sickly aspect, and perches upon some eminence
“where she can reconnoitre the operations of other birds in the
“process of nidification. If a discovery suitable to her purpose
“cannot be made from her stand, she becomes more restless,
“and is seen flitting from tree to tree, till a place of deposit can
“be found. I once had an opportunity of witnessing a scene of
“this sort which I cannot forbear to relate. Seeing a female
“prying into a bunch of bushes in search of a nest, I determined
“to see the result, if practicable; and knowing how easily they
“are disconcerted by the near approach of man, I mounted my
“horse, and proceeded slowly, sometimes seeing and sometimes
“losing sight of her, till I had travelled nearly two miles along
“the margin of a creek. She entered every thick place, prying
“with the strictest scrutiny into places where the small birds
“usually build, and at last darted suddenly into a thick copse
“of alders and briars, where she remained five or six minutes,
“when she returned, soaring above the underwood, and return-
“ed to the company she had left feeding in the field. Upon en-
“tering the covert I found the nest of a Yellow-throat, with an

“egg of each. Knowing the precise time of deposit, I noted
“the spot and date which a view of determining a question of
“importance, the time required to hatch the egg of the Cow-
“bird, which I supposed to commence from the time of the
“Yellow-throat’s laying the last egg. A few days after, the
“nest was removed I knew not how, and I was disappointed.
“In the progress of the Cow-bird along the creek’s side she en-
“tered the thick boughs of a small cedar, and returned several
“times before she could prevail on herself to quit the place;
“and upon examination, I found a Sparrow sitting on its nest,
“on which she no doubt would have stolen in the absence of
“the owner. It is, I believe certain, that the Cow-pen finch
“never makes a forcible entry upon the premises by attacking
“other birds and ejecting them from their rightful tenements,
“although they are all perhaps inferior in strength, except the
“Blue-bird, which, although of a mild as well as affectionate
“dispositon, makes a vigorous resistance when assaulted. Like
“most other tyrants and thieves they are cowardly, and accom-
“plish by stealth what they cannot obtain by force.

“The deportment of the Yellow-throat on this occasion is not
“to be omitted. She returned while I waited near the spot, and
“darted into her nest, but returned immediately and perched
“upon a bough near the place, remained a minute or two and
“entered it again, returned and disappeared. In ten minutes
“she returned with the male. They chattered with great agi-
“tation for half an hour seeming to participate in the affront,
“and then left the place. I believe all the birds thus intruded
“on manifest more or less concern at finding the egg of a
“stranger in their own nests. Among these the Sparrow is par-
“ticularly punctilious; for she sometimes chirps her complaints
“for a day or two, and often deserts the premises altogether,
“even after she has deposited one or more eggs. The follow-
“ing anecdote will show not only that the Cow-pen finch in-
“sinuates herself sllily into the nests of other birds, but that even
“the most pacific of them will resent the insult. A Blue-bird
“had built for three successive seasons in the cavity of a mul-

“berry tree near my dwelling. One day when the nest was
“nearly finished, I discovered a female Cow-bird perched up-
“on a fence stake near it, with her eyes apparently fixed upon
“the spot while the builder was busy in adjusting her nest.
“The moment she left it the intruder darted into it, and in five
“minutes returned and sailed off to her companions with seem-
“ing delight, which she expressed by her gestures and notes.
“The Blue-bird soon returned and entered the nest, but instan-
“taneously fluttered back with much apparent hesitation, and
“perched upon the highest branch of the tree, uttering a rapid-
“ly repeated note of complaint and resentment, which soon
“brought the male, who reciprocated her feelings by every de-
“monstration of the most vindictive resentment. They entered
“the nest together and returned several times, uttering their
“uninterrupted complaints for ten or fifteen minutes. The male
“then darted away to the neighbouring trees as if in quest of
“the offender, and fell upon a Cat-bird, which he chastised se-
“verely, and then turned to an innocent Sparrow that was
“chanting its ditty in a peach tree. Notwithstanding the affront
“was so passionately resented, I found the Blue-bird had laid
“an egg the next day. Perhaps a tenant less attached to a favour-
“ite spot would have acted more fastidiously, by deserting the
“premises altogether. In this instance, also, I determined to
“watch the occurrences that were to follow, but on one of my
“morning visits I found the common enemy of the eggs and
“young of all the small birds had despoiled the nest, a Coluber
“was found coiled in the hollow, and the eggs sucked.

“Agreeably to my observation, all the young birds destined
“to cherish the young Cow-bird are of a mild and affectionate
“disposition; and it is not less remarkable, that they are all
“smaller than the intruder; the Blue-bird is the only one nearly
“as large. This is a good natured mild creature, although it
“makes a vigorous defence when assaulted. The Yellow-throat,
“the Sparrow, the Goldfinch, the Indigo-bird, and the Blue-
“bird, are the only birds in whose nests I have found the eggs

“ or the young of the Cow-pen finch, though doubtless there
“ are some others.

“ What becomes of the eggs or young of the proprietor?
“ This is the most interesting question that appertains to this
“ subject. There must be some special law of nature which de-
“ termines that the young of the proprietors are never to be
“ found tenants in common with the young Cow-bird. I shall
“ offer the result of my own experience on this point, and leave
“ it to you and others better versed in the mysteries of nature
“ than I am to draw your own conclusions. Whatever theory
“ may be adopted the facts must remain the same. Having dis-
“ covered a Sparrow’s nest with five eggs, four and one, and
“ the Sparrow sitting, I watched the nest daily. The egg of the
“ Cow-bird occupied the centre, and those of the Sparrow were
“ pushed a little up the sides of the nest. Five days after the
“ discovery I perceived the shell of the Finch’s egg broken,
“ and the next the bird was hatched. The Sparrow returned
“ while I was near the nest, with her mouth full of food with
“ which she fed the young Cow-bird with every possible
“ mark of affection, and discovered the usual concern at my
“ approach. On the succeeding day only two of the Sparrow’s
“ eggs remained, and the next day there were none. I sought
“ in vain for them on the ground and in every direction.

“ Having found the eggs of the Cow-bird in the nest of a Yel-
“ low-throat, I repeated my observations. The process of incu-
“ bation had commenced, and on the seventh day from the dis-
“ covery I found a young Cow-bird that had been hatched du-
“ ring my absence of twenty-four hours, all the eggs of the
“ proprietor remaining. I had not an opportunity of visiting
“ the nest for three days, and on my return there was only one
“ egg remaining, and that rotten. The Yellow-throat attended
“ the young interloper with the same apparent care and affection
“ as if it had been its own offspring.

“ The next year my first discovery was in a Blue-bird’s nest
“ built in a hollow stump. The nest contained six eggs, and the
“ process of incubation was going on. Three or four days after

“my first visit I found a young Cow-bird, and three eggs remaining. I took the eggs out; two contained young birds apparently come to their full time, and the other was rotten. I found one of the other eggs on the ground at the foot of the stump, differing in no respect from those in the nest, no signs of life being discoverable in either.

“Soon after this I found a Goldfinch’s nest with one egg of each only, and I attended it carefully till the usual complement of the owner were laid. Being obliged to leave home, I could not ascertain precisely when the process of incubation commenced; but from my reckoning, I think the egg of the Cow-bird must have been hatched in nine or ten days from the commencement of incubation. On my return I found the young Cow-bird occupying nearly the whole nest, and the foster mother as attentive to it as she could have been to her own. I ought to acknowledge here, that in none of these instances could I ascertain exactly the time required to hatch the Cow-bird’s eggs; and that of course none of them are decisive; but is it not strange that the egg of the intruder should be so uniformly the first hatched? The idea of the egg being larger, and therefore from its own gravity finding the centre of the nest, is not sufficient to explain the phenomenon; for in this situation the other eggs would be proportionably elevated at the sides, and therefore receive as much or more warmth from the body of the incumbent than the other.* This principle would scarcely apply to the eggs of the Blue-bird, for they are nearly of the same size; if there be any difference it would be in favour of the eggs of the builder of the nest. How do the eggs get out of the nest? Is it by the size and nestling of the young Cow-bird? This cannot always be the case; because in the instance of the Blue-bird’s nest in the hollow stump, the cavity was a foot deep, the nest at the

* The ingenious writer seems not to be aware that almost all birds are in the habit, while sitting, of changing the eggs from the centre to the circumference, and *vice versa*, that all of them may receive an equal share of warmth.

“bottom, and the ascent perpendicular; nevertheless the eggs
“were removed although filled with young ones; moreover, a
“young Cow-pen finch is as helpless as any other young bird,
“and so far from having the power of ejecting others from the
“nest, or even the eggs, that they are sometimes found on the
“ground under the nest, especially when the nest happens to
“be very small. I will not assert that the eggs of the builder of
“the nest are never hatched; but I can assert that I have never
“been able to find one instance to prove the affirmative. If all
“the eggs of both birds were to be hatched, in some cases the nest
“would not hold half of them; for instance, those of the Spar-
“row, or Yellow-bird. I will not assert that the supposititious
“egg is brought to perfection in less time than those of the bird
“to which the nest belongs; but from the fact stated, I am in-
“clined to adopt such an opinion. How are the eggs removed
“after the accouchement of the spurious occupant? By the pro-
“prietor of the nest unquestionably; for this is consistent with
“the rest of her economy. After the power of hatching them
“is taken away by her attention to the young stranger, the eggs
“would be only an incumbrance, and therefore instinct prompts
“her to remove them. I might add, that I have sometimes
“found the eggs of the Sparrow, in which were unmaturred
“young ones, lying near the nest, containing a Cow-bird, and
“therefore I cannot resist this conclusion. Would the foster
“parent feed two species of young at the same time? I believe
“not. I have never seen an instance of any bird feeding the
“young of another, unless immediately after losing her own.
“I should think the sooty looking stranger would scarcely in-
“terest a mother while the cries of her own offspring, always
“intelligible, were to be heard. Should such a competition
“ever take place, I judge the stranger would be the sufferer,
“and probably the species soon become extinct. Why the *lex*
“*naturæ conservatrix* should decide in favour of the surrep-
“titious progeny is not for me to determine.

“As to the vocal powers of this bird, I believe its pretensions
“are very humble, none of its notes deserving the epithet mu-

“sical. The sort of simple cackling complaint it utters at being disturbed, constitutes also the expression of its pleasure at finding its companions, varying only in a more rapidly repeated monotony. The deportment of the male, during his promiscuous intercourse with the other sex, resembles much that of a pigeon in the same situation. He uses nearly the same gestures; and by attentively listening you will hear a low, guttural sort of muttering, which is the most agreeable of his notes, and not unlike the cooing of a pigeon. This, Sir, is the amount of my information on this subject; and is no more than a transcript from my notes made several years ago. For ten years past since I have lived in this city, many of the impressions of nature have been effaced, and artificial ideas have occupied their places. The pleasure I formerly received in viewing and examining the objects of nature, are, however, not entirely forgotten; and those which remain, if they can interest you, are entirely at your service. With the sincerest wishes for the success of your useful and arduous undertaking,

“I am, dear Sir,

“Yours, very respectfully,

“NATHANIEL POTTER.”

To the above very interesting detail I shall add the following recent fact which fell under my own observation, and conclude my account of this singular species.

In the month of July last I took from the nest of the Maryland Yellow-throat, which was built among the dry leaves at the root of a briar bush, a young male Cow Bunting, which filled and occupied the whole nest. I had previously watched the motions of the foster parents for more than an hour, in order to ascertain whether any more of their young were lurking about or not; and was fully satisfied that there were none. They had in all probability perished in the manner before mentioned. I took this bird home with me, and placed it in the same cage with a Red-bird (*Loxia cardinalis*), who, at first, and for several minutes after, examined it closely, and seemingly with great

curiosity. It soon became clamorous for food, and from that moment the Red-bird seemed to adopt it as his own, feeding it with all the assiduity and tenderness of the most affectionate nurse. When he found that the grasshopper which he had brought it was too large for it to swallow, he took the insect from it, broke it in small portions, chewed them a little to soften them, and with all the gentleness and delicacy imaginable put them separately into its mouth. He often spent several minutes in looking at and examining it all over, and in picking off any particles of dirt that he observed on its plumage. In teaching and encouraging it to learn to eat of itself, he often reminded me of the lines of Goldsmith,

He tried each art, reprov'd each dull delay,
Allur'd to "*fav'rite food*," and led the way.

This Cow-bird is now six months old, is in complete plumage; and repays the affectionate services of his foster parent with a frequent display of all the musical talents with which nature has gifted him. These, it must be confessed, are far from being ravishing; yet for their singularity are worthy of notice. He spreads his wings, swells his body into a globular form, bristling every feather in the manner of a turkey cock, and with great seeming difficulty utters a few low, spluttering notes, as if proceeding from his belly; always, on these occasions, strutting in front of the spectator with great consequential affectation.

To see the Red-bird, who is himself so excellent a performer, silently listening to all this guttural splutter, reminds me of the great Handel contemplating a wretched cat-gut scraper. Perhaps, however, these may be meant for the notes of *love* and *gratitude*, which are sweeter to the ear, and dearer to the heart, than all the artificial solos or concertos on this side heaven.

The length of this species is seven inches, breadth eleven inches; the head and neck is of a very deep silky drab; the upper part of the breast a dark changeable violet; the rest of the bird is black, with a considerable gloss of green when exposed to a good light; the form of the bill is faithfully represented in

the plate; it is evidently that of an Emberiza; the tail is slightly forked; legs and claws glossy black, strong and muscular; iris of the eye dark hazel. Catesby says of this bird, "it is all over of a brown colour, and something lighter below;" a description that applies only to the female, and has been repeated, in nearly the same words, by almost all succeeding ornithologists. The young male birds are at first altogether brown, and for a month, or more, are naked of feathers round the eye and mouth; the breast is also spotted like that of a Thrush, with light drab and darker streaks. In about two months after they leave the nest, the black commences at the shoulders of the wings, and gradually increases along each side, as the young feathers come out, until the bird appears mottled on the back and breast with deep black and light drab. At three months the colours of the plumage are complete, and, except in moulting, are subject to no periodical change.

SPECIES 5. *EMBERIZA NIVALIS*.

SNOW BUNTING.

[Plate XXI.—Fig. 2.]

LINN. *Syst.* 308.—*Arct. Zool.* p. 355. No. 222.—*Tawny Bunting*,
Br. Zool. No. 121.—*L'Ortolan de Neige*, BUFFON, IV, 329. *Pl.*
Enl. 497.—PEALE'S *Museum*, No. 5900.

THIS being one of those birds common to both continents, its migrations extending almost from the very pole, to a distance of forty or fifty degrees around; and its manners and peculiarities having been long familiarly known to the naturalists of Europe, I shall in this place avail myself of the most interesting parts of their accounts; subjoining such particulars as have fallen under my own observation.

“These birds,” says Mr. Pennant, “inhabit not only Greenland* but even the dreadful climate of Spitzbergen, where vegetation is nearly extinct, and scarcely any but *cryptogamous* plants are found. It therefore excites wonder, how birds, which are graminivorous in every other than those frost-bound regions, subsist: yet are there found in great flocks both on the land and ice of Spitzbergen.† They annually pass to this country by way of Norway; for in the spring, flocks innumerable appear, especially on the Norwegian isles; continue only three weeks, and then at once disappear.‡ As they do not breed in Hudson’s bay it is certain that many retreat to this last of lands, and totally uninhabited, to perform in full security the duties of love, incubation, and nutrition. That they breed in Spitzbergen is very probable; but we are assured that they do so in Greenland. They arrive there in April, and

* CRANTZ, I, 77. † Lord MULGLAVE’S Voyage, 188. MARTIN’S Voyage, 73.

‡ LEEMS, 256.

“ make their nests in the fissures of the rocks, on the mountains, in May; the outside of their nest is grass, the middle of feathers; and the lining the down of the Arctic fox. They lay five eggs, white spotted with brown: they sing finely near their nest.

“ They are caught by the boys in autumn when they collect near the shores in great flocks, in order to migrate, and are eaten dried.*

“ In Europe they inhabit during summer the most naked Lapland Alps; and descend in rigorous seasons into Sweden, and fill the roads and fields; on which account the Dalecarlians call them *illwarsfogel*, or bad-weather birds. The Uplanders *hardwarsfogel*, expressive of the same. The Laplanders style them *Alaipg*. Leemst† remarks, I know not with what foundation, that they fatten on the flowing of the tides in Finmark; and grow lean on the ebb. The Laplanders take them in great numbers in hair-springs for the tables, their flesh being very delicate.

“ They seem to make the countries within the whole Arctic circle their summer residence, from whence they overflow the more southern countries in amazing multitudes, at the setting in of winter in the frigid zone. In the winter of 1778-9, they came in such multitudes into *Birsa*, one of the Orkney islands, as to cover the whole barony; yet of all the numbers hardly two agreed in colours.

“ Lapland, and perhaps Iceland, furnishes the north of Britain with the swarms that frequent these parts during winter, as low as the Cheviot Hills, in lat. 52° 32'. Their resting places the *Feroe* isles, *Schetland* and the *Orkneys*. The highlands of Scotland, in particular, abound with them. Their flights are immense, and they mingle so closely together in form of a ball that the fowlers make great havoc among them. They arrive lean, soon become very fat, and are delicious food. They either arrive in the highlands very early, or a

* FAUN. Greenl. 118.

† Finmark, 255.

“few breed there, for I had one shot for me at Invercauld, the fourth of August. But there is a certainty of their migration; for multitudes of them fall, wearied with their passage, on the vessels that are sailing through the Pentland frith.*

“In their summer dress they are sometimes seen in the south of England;† the climate not having severity sufficient to affect the colours; yet now and then a milk white one appears, which is usually mistaken for a white Lark.

“Russia and Siberia receive them in their severe seasons annually, in amazing flocks, overflowing almost all Russia. They frequent the villages, and yield a most luxurious repast. They vary there infinitely in their winter colours, are pure white, speckled, and even quite brown.‡ This seems to be the influence of difference of age more than of season. Germany has also its share of them. In Austria they are caught and fed with millet, and afford the epicure a treat equal to that of the Ortolan.”§

These birds appear in the northern districts of the United States, early in December, or with the first heavy snow, particularly if drifted by high winds. They are usually called the *White Snow-bird*, to distinguish them from the small dark bluish Snow-bird already described. Their numbers increase with the increasing severity of weather, and depth of snow. Flocks of them sometimes reach as far south as the borders of Maryland; and the whiteness of their plumage is observed to be greatest towards the depth of winter. They spread over the Genesee country and the interior of the district of Maine, flying in close compact bodies, driving about most in a high wind; sometimes alighting near the doors, but seldom sitting long, being a roving, restless bird. In these plentiful regions, where more valuable game is abundant, they hold out no temptation to the sportsman or hunter; and except the few caught by boys in snares, no other attention is paid to them. They are, however, universally considered as the harbingers of severe cold weather. How

* Bishop Pocock's Journal, MS.

† BELL's Travels, I, 198.

‡ MORTON's Northamp. p. 427.

§ KRAMER, Anim. Austr. 372.

far westward they extend I am unable to say. One of the most intelligent and expert hunters who accompanied captains Lewis and Clark on their expedition to the Pacific Ocean, informs me, that he has no recollection of seeing these birds in any part of their tour, not even among the bleak and snowy regions of the Stony mountains; though the little blue one was in abundance.

The Snow Bunting derives a considerable part of its food from the seeds of certain aquatic plants, which may be one reason for its preferring these remote northern countries, so generally intersected with streams, ponds, lakes and shallow arms of the sea, that probably abound with such plants. In passing down the Seneca river towards lake Ontario, late in the month of October, I was surprized by the appearance of a large flock of these birds feeding on the surface of the water, supported on the tops of a growth of weeds that rose from the bottom, growing so close together that our boat could with great difficulty make its way through them. They were running about with great activity; and those I shot and examined were filled, not only with the seeds of this plant, but with a minute kind of shell fish that adheres to the leaves. In these kind of aquatic excursions they are doubtless greatly assisted by the length of their hind heel and claws. I also observed a few on Table rock, above the falls of Niagara, seemingly in search of the same kind of food.

According to the statements of those traders who have resided near Hudson's bay, the Snow Buntings are the earliest of their migratory birds, appearing there about the eleventh of April, staying about a month or five weeks, and proceeding farther north to breed. They return again in September; stay till November, when the severe frosts drive them southward.*

The summer dress of the Snow Bunting is a tawny brown, interspersed with white, covering the head, neck and lower parts; the back is black, each feather being skirted with brown; wings and tail also black, marked in the following manner:—

* Lond. Phil. Trans. LXII, 403.

the three secondaries next the body are bordered with bay, the next with white, and all the rest of the secondaries, as well as their coverts, and shoulder of the wing, pure white; the first six primaries are black from their coverts downwards to their extremities; tail forked, the three exterior feathers, on each side, white, marked on the outer edge, near the tip, with black; the rest nearly all black; tail coverts reddish brown, fading into white; bill pale brown; legs and feet black; hind claw long like that of the Lark, though more curved. In winter they become white on the head, neck and whole under side, as well as great part of the wings and rump, the back continues black skirted with brown. Some are even found pure white. Indeed so much does their plumage vary according to age and season, that no two are found at any time alike.

SPECIES 6. EMBERIZA CIRIS.

PAINTED BUNTING.

[Plate XXIV.—Fig. 1, *Male*.—Fig. 2, *Female*.]

LINN. *Syst.* 313.—*Painted Finch*, CATESBY, I, 44.—EDW. 130, 173.
—*Arct. Zool.* p. 362, No. 226.—*Le Verdier de la Louisiane, dit vulgairement le Pape*, BRISSON, III, 200. *App.* 74.—BUFFON, IV, 76. *Pl. Enl.* 159.—LATH. II, 206.—*Linaria ciris, the Painted Finch, or Nonpareil*, BARTRAM, p. 291.—PEALE'S *Museum*, No. 6062, and 6063.

THIS is one of the most numerous of the little summer birds of Lower Louisiana, where it is universally known among the French inhabitants, and called by them "*Le Pape*," and by the Americans the *Nonpareil*. Its gay dress and docility of manners have procured it many admirers; for these qualities are strongly attractive, and carry their own recommendations always along with them. The low countries of the southern states, in the vicinity of the sea, and along the borders of our large rivers, particularly among the rice plantations, are the favourite haunts of this elegant little bird. A few are seen in North Carolina; in South Carolina they are more numerous; and still more so in the lower parts of Georgia. To the westward I first met them at Natchez, on the Mississippi, where they seemed rather scarce. Below Baton Rouge, along the Levee, or embankment of the river, they appeared in greater numbers; and continued to become more common as I approached New Orleans, where they were warbling from almost every fence, and crossing the road before me every few minutes. Their notes very much resemble those of the Indigo Bird (Plate VI, fig. 6.); but want the strength and energy of the latter, being more feeble and more concise.

I found these birds very commonly domesticated in the houses of the French inhabitants of New Orleans; appearing to be the most common cage bird they have. The negroes often bring them to market from the neighbouring plantations, for sale; either in cages, taken in traps, or in the nest. A wealthy French planter, who lives on the banks of the Mississippi, a few miles below *Bayo Fourche*, took me into his garden, which is spacious and magnificent, to show me his aviary; where, among many of our common birds, I observed several Nonpareils, two of which had nests, and were then hatching.

Were the same attention bestowed on these birds as on the Canary, I have no doubt but they would breed with equal facility, and become equally numerous and familiar, while the richness of their plumage might compensate for their inferiority of song. Many of them have been transported to Europe; and I think I have somewhere read that in Holland attempts have been made to breed them and with success. When the employments of the people of the United States become more sedentary, like those of Europe, the innocent and agreeable amusement of keeping and rearing birds in this manner, will become more general than it is at present, and their manners better known. And I cannot but think, that an intercourse with these little innocent warblers is favourable to delicacy of feeling, and sentiments of humanity; for I have observed the rudest and most savage softened into benevolence while contemplating the interesting manners of these inoffensive little creatures.

Six of these birds, which I brought with me from New Orleans by sea, soon became reconciled to the cage. In good weather the males sung with great sprightliness, though they had been caught only a few days before my departure. They were greedily fond of flies, which accompanied us in great numbers during the whole voyage; and many of the passengers amused themselves with catching these and giving them to the Nonpareils; till at length the birds became so well acquainted with this amusement, that as soon as they perceived any of the people attempting to catch flies, they assembled at the front of the

cage, stretching out their heads through the wires with eager expectation, evidently much interested in the issue of their success.

These birds arrive in Louisiana from the south about the middle of April, and begin to build early in May. In Savannah, according to Mr. Abbot, they arrive about the twentieth of April. Their nests are usually fixed in orange hedges, or on the lower branches of the orange tree; I have also found them in a common bramble or blackberry bush. They are formed exteriorly of dry grass, intermingled with the silk of caterpillars, lined with hair, and lastly with some extremely fine roots of plants. The eggs are four or five, white, or rather pearl coloured, marked with purplish brown specks. As some of these nests had eggs so late as the twenty-fifth of June, I think it probable that they sometimes raise two broods in the same season. The young birds of both sexes, during the first season, are of a fine green olive above, and dull yellow below. The females undergo little or no change, but that of becoming of a more brownish cast. The males, on the contrary, are long and slow in arriving at their full variety of colours. In the second season the blue on the head begins to make its appearance, intermixed with the olive green. The next year the yellow shows itself on the back and rump; and also the red, in detached spots, on the throat and lower parts. All these colours are completed in the fourth season, except, sometimes, that the green still continues on the tail. On the fourth and fifth season the bird has attained his complete colours, and appears then as represented in the plate (fig. 1). No dependance, however, can be placed on the regularity of this change in birds confined in a cage, as the want of proper food, sunshine, and variety of climate, all conspire against the regular operations of nature.

The Nonpareil is five inches and three quarters long, and eight inches and three quarters in extent; head, neck above, and sides of the same, a rich purplish blue; eyelid, chin, and whole lower parts, vermilion; back and scapulars glossy yellow, stained with rich green, and in old birds with red; lesser wing

coverts purple; larger green; wings dusky red, sometimes edged with green; lower part of the back, rump and tail coverts deep glossy red, inclining to carmine; tail slightly forked, purplish brown (generally green); legs and feet leaden gray; bill black above, pale blue below; iris of the eye hazel.

The female (fig. 2.) is five and a half inches long, and eight inches in extent; upper parts green olive, brightest on the rump; lower parts a dusky Naples yellow, brightest on the belly, and tinged considerably on the breast with dull green, or olive; cheeks or ear-feathers marked with lighter touches; bill wholly a pale lead colour, lightest below; legs and feet the same.

The food of these birds consists of rice, insects, and various kinds of seeds that grow luxuriantly in their native haunts. I also observed them eating the seeds or internal grains of ripe figs. They frequent gardens, building within a few paces of the house; are particularly attached to orangeries; and chant occasionally during the whole summer. Early in October they retire to more southern climates, being extremely susceptible of cold.

SPECIES 7. EMBERIZA LEUCOPHRYS.

WHITE-CROWNED BUNTING.

[Plate XXXI.—Fig. 4.]

TURTON, *Syst. p.* 536.—PEALE'S *Museum*, No. 6587.*

THIS beautifully marked species is one of the rarest of its tribe in the United States, being chiefly confined to the northern districts, or higher interior parts of the country, except in severe winters, when some few wanderers appear in the lower parts of the state of Pennsylvania. Of three specimens of this bird, the only ones I have yet met with, the first was caught in a trap near the city of New York, and lived with me several months. It had no song, and, as I afterwards discovered, was a female. Another, a male, was presented to me by Mr. Michael, of Lancaster, Pennsylvania. The third, a male, and in complete plumage, was shot in the Great Pine swamp, in the month of May, and is faithfully represented in the plate. It appeared to me to be unsuspicious, silent and solitary; flitting in short flights among the underwood and piles of prostrate trees torn up by a tornado, that some years ago passed through the swamp. All my endeavours to discover the female or nest were unsuccessful.

From the great scarcity of this species our acquaintance with its manners is but very limited. Those persons who have resided near Hudson's bay, where it is common, inform us, that it makes its nest in June, at the bottom of willows, and lays four chocolate-coloured eggs. Its flight is said to be short and silent; but when it perches it sings very melodiously.†

* Synonymes:—*Emberiza leucophrys*, GMEL. *Syst.* 1, p. 874.—LATH. *Syn.* III, p. 200. 44. *Id.* *Sup.* p. 159.—*Id.* *Ind.* 1, p. 413.—*White-Crowned Bunting.* *Arct. Zool.* II, No. 22.

† *Arct. Zool.*

The White-crowned Bunting is seven inches long, and ten inches in extent; the bill a cinnamon brown; crown from the front to the hind head pure white, bounded on each side by a stripe of black proceeding from each nostril; and these again are bordered by a stripe of pure white passing over each eye to the hind head, where they meet; below this another narrow stripe of black passes from the posterior angle of the eye, widening as it descends to the hind head; chin white; breast, sides of the neck, and upper parts of the same, very pale ash; back streaked laterally with dark rusty brown and pale bluish white; wings dusky, edged broadly with brown; the greater and lesser coverts tipped broadly with white, forming two handsome bands across the wing; tertials black, edged with brown and white; rump and tail coverts drab, tipped with a lighter tint; tail long, rounded, dusky, and edged broadly with drab; belly white; vent pale yellow ochre; legs and feet reddish brown; eye reddish hazel, lower eye-lid white.

The female may easily be distinguished from the male, by the white on the head being less pure, the black also less in extent, and the ash on the breast darker; she is also smaller in size.

There is a considerable resemblance between this species and the White-throated Sparrow. Yet they rarely associate together; the latter remaining in the lower parts of Pennsylvania in great numbers, until the beginning of May, when they retire to the north and to the high inland regions to breed; the former inhabiting much more northern countries; and though said to be common in Canada, rarely visiting this part of the United States.

SPECIES 8. EMBERIZA GRAMINEA.

BAY-WINGED BUNTING.

[Plate XXXI.—Fig. 5.]

Grass Finch, Arct. Zool. No. 253.—LATH. III, 273.—TURTON, Syst. 1, p. 565.

THE manners of this bird bear great affinity to those of the common Bunting of Britain. It delights in frequenting grass and clover fields, perches on the tops of the fences, singing from the middle of April to the beginning of July, with a clear and pleasant note, in which particular it far excels its European relation. It is partially a bird of passage here, some leaving us and others remaining with us during the winter. In the month of March I observed them numerous in the lower parts of Georgia, where, according to Mr. Abbot, they are only winter visitants. They frequent the middle of fields more than hedges or thickets; run along the ground like a Lark, which they also resemble in the great breadth of their wings: they are timid birds; and rarely approach the farm house.

Their nest is built on the ground, in a grass or clover field, and formed of old withered leaves and dry grass; and lined with hair. The female lays four or five eggs of a grayish white. On the first week in May I found one of their nests with four young, from which circumstance I think it probable that they raise two or more broods in the same season.

This bird measures five inches and three quarters in length, and ten inches and a half in extent; the upper parts are cinereous brown, mottled with deep brown or black; lesser wing coverts bright bay, greater black, edged with very pale brown; wings dusky, edged with brown; the exterior primary edged with white; tail sub-cuneiform, the outer feather white on the exterior edge,

and tip with white, the next tip and edged for half an inch with the same, the rest dusky, edged with pale brown; bill dark brown above, paler below; round the eye is a narrow circle of white; upper part of the breast yellowish white, thickly streaked with pointed spots of black that pass along the sides; belly and vent white; legs and feet flesh coloured; third wing feather from the body nearly as long as the tip of the wing when shut.

I can perceive little or no difference between the colours and markings of the male and female.

GENUS 37. TANAGRA. TANAGER.

SPECIES 1. *T. RUBRA*.

SCARLET TANAGER.

[Plate XI.—Figs. 3 and 4.]

Tanagra rubra, LINN. *Syst.* I, p. 314, 3.—*Cardinal de Canada*, BRISS. *Orn.* III, p. 48, *Pl.* 2, *fig.* 5.—LATH. II, p. 217, *No.* 3.—*Scarlet Sparrow*, EDW. *Pl.* 343.—*Canada Tanager*, and *Olive Tanager*, ARCT. *Zool.* p. 369, *No.* 237—238.—PEALE'S *Museum*, *No.* 6128.

THIS is one of the gaudy foreigners (and perhaps the most showy) that regularly visit us from the torrid regions of the south. He is drest in the richest scarlet, set off with the most jetty black, and comes, over extensive countries, to sojourn for a time among us. While we consider him entitled to all the rights of hospitality, we may be permitted to examine a little into his character, and endeavour to discover, whether he has any thing else to recommend him besides that of having a fine coat, and being a great traveller.

On or about the first of May this bird makes his appearance in Pennsylvania. He spreads over the United States, and is found even in Canada. He rarely approaches the habitations of man, unless perhaps to the orchard, where he sometimes builds; or to the cherry trees in search of fruit. The depth of the woods is his favourite abode. There, among the thick foliage of the tallest trees, his simple and almost monotonous notes *chip, churr*, repeated at short intervals, in a pensive tone, may be occasionally heard; which appear to proceed from a considerable distance though the bird be immediately above you; a faculty bestowed on him by the beneficent Author of Nature, no doubt for his protection; to compensate in a degree for the danger to which

his glowing colour would often expose him. Besides this usual note, he has, at times, a more musical chant, something resembling in mellowness that of the Baltimore Oriole. His food consists of large, winged insects, such as wasps, hornets and humble bees, and also of fruit, particularly those of that species of *Vaccinium* usually called huckle-berries, which in their season form almost his whole fare. His nest is built about the middle of May, on the horizontal branch of a tree, sometimes an apple tree, and is but slightly put together; stalks of broken flax, and dry grass, so thinly wove together that the light is easily perceivable through it, form the repository of his young. The eggs are three, of a dull blue, spotted with brown or purple. They rarely raise more than one brood in a season, and leave us for the south about the last week in August.

Among all the birds that inhabit our woods there is none that strike the eye of a stranger, or even a native, with so much brilliancy as this. Seen among the green leaves, with the light falling strongly on his plumage, he really appears beautiful. If he has little of melody in his notes to charm us, he has nothing in them to disgust. His manners are modest, easy, and inoffensive. He commits no depredations on the property of the husbandman; but rather benefits him by the daily destruction in spring of many noxious insects; and when winter approaches he is no plundering dependent, but seeks in a distant country for that sustenance which the severity of the season denies to his industry in this. He is a striking ornament to our rural scenery, and none of the meanest of our rural songsters. Such being the true traits of his character, we shall always with pleasure welcome this beautiful, inoffensive stranger, to our orchards, groves and forests.

The male of this species, when arrived at his full size and colours, is six inches and a half in length, and ten and a half broad. The whole plumage is of a most brilliant scarlet, except the wings and tail, which are of a deep black; the latter handsomely forked, sometimes minutely tipped with white, and the interior edges of the wing feathers nearly white; the bill is

strong, considerably inflated like those of his tribe, the edge of the upper mandible somewhat irregular, as if toothed, and the whole of a dirty gamboge or yellowish horn colour; this however, like that of most other birds, varies according to the season. About the first of August he begins to moult; the young feathers coming out of a greenish yellow colour, until he appears nearly all dappled with spots of scarlet and greenish yellow. In this state of plumage he leaves us. How long it is before he recovers his scarlet dress, or whether he continues of this greenish colour all winter, I am unable to say. The iris of the eye is of a cream colour, the legs and feet light blue. The female (now I believe for the first time figured) is green above and yellow below; the wings and tail brownish black, edged with green. The young birds, during their residence here the first season, continue nearly of the same colour with the female. In this circumstance we again recognize the wise provision of the Deity, in thus clothing the female and the inexperienced young, in a garb so favourable for concealment among the foliage; as the weakness of the one, and the frequent visits of the other to her nest, would greatly endanger the safety of all. That the young males do not receive their red plumage until the early part of the succeeding spring, I think highly probable, from the circumstance of frequently finding their red feathers, at that season, intermixed with green ones, and the wings also broadly edged with green. These facts render it also probable that the old males regularly change their colour, and have a summer and winter dress; but this, farther observations must determine.

There is in the Brazils a bird of the same genus with this, and very much resembling it, so much so as to have been frequently confounded with it by European writers. It is the *Tanagra Brazilia* of Turton; and though so like, is a yet very distinct species from the present, as I have myself had the opportunity of ascertaining, by examining two very perfect specimens from Brazil, now in the possession of Mr. Peale, and comparing them with this. The principal differences are these: The plumage of the Brazilian is almost black at bottom, very deep scar-

let at the surface, and of an orange tint between; ours is ash coloured at bottom, white in the middle, and bright scarlet at top. The tail of ours is *forked*, that of the other cuneiform or *rounded*. The bill of our species is more inflated, and of a greenish yellow colour—the others is black above, and whitish below towards the base. The whole plumage of the southern species is of a coarser, stiffer quality, particularly on the head. The wings and tail, in both, are black.

In the account which Buffon gives of the Scarlet Tanager, and Cardinal Grosbeak, there appears to be very great confusion, and many mistakes; to explain which it is necessary to observe, that Mr. Edwards in his figure of the Scarlet Tanager, or Scarlet Sparrow as he calls it, has given it a hanging crest, owing no doubt to the loose disordered state of the plumage of the stuffed or dried skin from which he made his drawing. Buffon has afterwards confounded the two together by applying many stories originally related of the Cardinal Grosbeak, to the Scarlet Tanager; and the following he gravely gives as his reason for so doing. "We may presume," says he, "that "when travellers talk of the warble of the Cardinal they mean "the Scarlet Cardinal, for the other Cardinal is of the genus of "the Grosbeaks, consequently a silent bird."* This *silent* bird, however, has been declared by an eminent English naturalist, to be almost equal to their own nightingale! The Count also quotes the following passage from Charlevoix to prove the same point, which if his translator has done him justice, evidently proves the reverse. "It is scarcely more than a hundred leagues," says this traveller, "*south* of Canada, that the Cardinal begins to be seen. Their song is sweet, their plumage "beautiful, and their head wears a crest." But the Scarlet Tanager is found even in Canada, as well as an hundred leagues to the south, while the Cardinal Grosbeak is not found in any great numbers north of Maryland. The latter therefore, it is highly probable, was the bird meant by Charlevoix, and not the Scar-

* Buffon, vol. iv, p. 209.

let Tanager. Buffon also quotes an extract of a letter from Cuba, which, if the circumstance it relates be true, is a singular proof of the estimation in which the Spaniards hold the Cardinal Grosbeak. "On Wednesday arrived at the port of Havanna a bark from Florida, loaded with Cardinal birds, skins and fruit. The Spaniards bought the Cardinal birds at so high a price as ten dollars a piece; and notwithstanding the public distress spent on them the sum of 18,000 dollars!"*

With a few facts more I shall conclude the history of the Scarlet Tanager. When you approach the nest, the male keeps cautiously at a distance, as if fearful of being seen; while the female hovers around in the greatest agitation and distress. When the young leave the nest the male parent takes a most active part in feeding and attending them, and is then altogether indifferent of concealment.

Passing through an orchard one morning I caught one of these young birds that had but lately left the nest. I carried it with me about half a mile, to show it to my friend Mr. William Bartram; and having procured a cage, hung it up on one of the large pine trees in the Botanic garden, within a few feet of the nest of an *Orchard Oriole*, which also contained young; hoping that the charity, or tenderness of the Orioles, would induce them to supply the cravings of the stranger. But Charity with them, as with too many of the human race, began and ended *at home*. The poor orphan was altogether neglected, notwithstanding its plaintive cries; and, as it refused to be fed by me, I was about to return it back to the place where I found it; when, towards the afternoon, a Scarlet Tanager, no doubt its own parent, was seen fluttering round the cage, endeavouring to get in. Finding this impracticable he flew off, and soon returned with food in his bill; and continued to feed it till after sunset, taking up his lodgings on the higher branches of the same tree. In the morning, almost as soon as day broke, he was again seen most actively engaged in the same affectionate manner; and, notwithstanding the insolence of the Orioles, con-

* Gmelli Careri.

tinued his benevolent offices the whole day, roosting at night as before. On the third or fourth day, he appeared extremely solicitous for the liberation of his charge, using every expression of distressful anxiety, and every call and invitation that nature had put in his power for him to come out. This was too much for the feelings of my venerable friend; he procured a ladder, and mounting to the spot where the bird was suspended, opened the cage, took out the prisoner, and restored him to liberty and to his parent, who with notes of great exultation accompanied his flight to the woods. The happiness of my good friend was scarcely less complete, and showed itself in his benevolent countenance; and I could not refrain saying to myself—If such sweet sensations can be derived from a simple circumstance of this kind, how exquisite, how unspeakably rapturous must the delight of those individuals have been, who have rescued their fellow beings from death, chains and imprisonment, and restored them to the arms of their friends and relations! Surely in such godlike actions virtue is its own most abundant reward.

SPECIES 2. TANAGRA ÆSTIVA.

SUMMER RED-BIRD.

[Plate VI.—Fig. 3, Male. Fig. 4, Female.]

Tanagra Mississippensis, LATH. *Ind. Orn.* I, 421, 5.—*Mexican Tanager*, LATHAM, *Syn.* III, 219, 5, B.—*Tanagra variegata*, *Ind. Orn.* I, 421, 6.—*Tanagra æstiva*, *Ind. Orn.* I, 422, 7.—*Muscicapa rubra*, LINN. *Syst.* I, 326, 8.—BUFF. VI, 252. *Pl. Ent.* 741.—CATESB. *Car.* I, 56.—*Merula flammula*, *Sandhill Red-bird*, BARTRAM, 299.—PEALE'S *Museum*, No. 6134.

THE change of colour which this bird is subject to during the first year, and the imperfect figure first given of it by Catesby, have deceived the European naturalists so much, that four different species have been formed out of this one, as appears by the above synonymes, all of which are referable to the present species, the Summer Red-bird. As the female differs so much in colour from the male, it has been thought proper to represent them both; the female having never to my knowledge appeared in any former publication; and all the figures of the other, that I have seen, being little better than *caricatures*, from which a foreigner can form no just conception of the original.

The male of the Summer Red-bird (fig. 3.) is wholly of a rich vermilion colour, most brilliant on the lower parts, except the inner vanes and tips of the wings, which are of a dusky brown; the bill is disproportionably large, and inflated, the upper mandible furnished with a process, and the whole bill of a yellowish horn colour; the legs and feet are light blue, inclining to purple; the eye large, the iris of a light hazel colour; the length of the whole bird seven inches and a quarter, and between the tips of the expanded wings twelve inches. The female (fig.

4.) differs little in size from the male; but is above of a brownish yellow olive, lightest over the eye; throat, breast, and whole lower part of the body of a dull orange yellow; tips and interior vanes of the wings brown; bill, legs, and eye as in the male. The nest is built in the woods on the horizontal branch of a half-grown tree, often an evergreen, at the height of ten or twelve feet from the ground, composed outwardly of broken stalks of dry flax, and lined with fine grass; the female lays three light blue eggs; the young are produced about the middle of June; and I suspect that the same pair raise no more than one brood in a season, for I have never found their nests but in May or June. Towards the middle of August they take their departure for the south, their residence here being scarcely four months. The young are at first of a green olive above, nearly the same colour as the female below, and do not acquire their full tints till the succeeding spring or summer.

The change, however, commences the first season before their departure. In the month of August the young males are distinguished from the females by their motleyed garb; the yellow plumage below, as well as the olive green above, first becoming stained with spots of a buff colour, which gradually brighten into red; these being irregularly scattered over the whole body, except the wings and tail, particularly the former, which I have often found to contain four or five green quills in the succeeding June. The first of these birds I ever shot was green-winged; and conceiving it at that time to be a non-descript, I made a drawing of it with care; and on turning to it at this moment I find the whole of the primaries, and two of the secondaries yellowish green, the rest of the plumage a full red. This was about the middle of May. In the month of August, of the same year, being in the woods with the gun, I perceived a bird of very singular plumage, and having never before met with such an oddity, instantly gave chase to it. It appeared to me, at a small distance, to be sprinkled all over with red, green, and yellow. After a great deal of difficulty, for the bird had taken notice of my eagerness, and had become extremely shy, I

SPECIES 2. TANAGRA ÆSTIVA.

SUMMER RED-BIRD.

[Plate VI.—Fig. 3, Male. Fig. 4, Female.]

Tanagra Mississippensis, LATH. *Ind. Orn.* I, 421, 5.—*Mexican Tanager*, LATHAM, *Syn.* III, 219, 5, B.—*Tanagra variegata*, *Ind. Orn.* I, 421, 6.—*Tanagra æstiva*, *Ind. Orn.* I, 422, 7.—*Muscicapa rubra*, LINN. *Syst.* I, 326, 8.—BUFF. VI, 252. *Pl. Ent.* 741.—CATESB. *Car.* I, 56.—*Merula flammula*, *Sandhill Red-bird*, BARTRAM, 299.—PEALE'S *Museum*, No. 6134.

THE change of colour which this bird is subject to during the first year, and the imperfect figure first given of it by Catesby, have deceived the European naturalists so much, that four different species have been formed out of this one, as appears by the above synonymes, all of which are referable to the present species, the Summer Red-bird. As the female differs so much in colour from the male, it has been thought proper to represent them both; the female having never to my knowledge appeared in any former publication; and all the figures of the other, that I have seen, being little better than *caricatures*, from which a foreigner can form no just conception of the original.

The male of the Summer Red-bird (fig. 3.) is wholly of a rich vermilion colour, most brilliant on the lower parts, except the inner vanes and tips of the wings, which are of a dusky brown; the bill is disproportionably large, and inflated, the upper mandible furnished with a process, and the whole bill of a yellowish horn colour; the legs and feet are light blue, inclining to purple; the eye large, the iris of a light hazel colour; the length of the whole bird seven inches and a quarter, and between the tips of the expanded wings twelve inches. The female (fig.

4.) differs little in size from the male; but is above of a brownish yellow olive, lightest over the eye; throat, breast, and whole lower part of the body of a dull orange yellow; tips and interior vanes of the wings brown; bill, legs, and eye as in the male. The nest is built in the woods on the horizontal branch of a half-grown tree, often an evergreen, at the height of ten or twelve feet from the ground, composed outwardly of broken stalks of dry flax, and lined with fine grass; the female lays three light blue eggs; the young are produced about the middle of June; and I suspect that the same pair raise no more than one brood in a season, for I have never found their nests but in May or June. Towards the middle of August they take their departure for the south, their residence here being scarcely four months. The young are at first of a green olive above, nearly the same colour as the female below, and do not acquire their full tints till the succeeding spring or summer.

The change, however, commences the first season before their departure. In the month of August the young males are distinguished from the females by their motleyed garb; the yellow plumage below, as well as the olive green above, first becoming stained with spots of a buff colour, which gradually brighten into red; these being irregularly scattered over the whole body, except the wings and tail, particularly the former, which I have often found to contain four or five green quills in the succeeding June. The first of these birds I ever shot was green-winged; and conceiving it at that time to be a non-descript, I made a drawing of it with care; and on turning to it at this moment I find the whole of the primaries, and two of the secondaries yellowish green, the rest of the plumage a full red. This was about the middle of May. In the month of August, of the same year, being in the woods with the gun, I perceived a bird of very singular plumage, and having never before met with such an oddity, instantly gave chase to it. It appeared to me, at a small distance, to be sprinkled all over with red, green, and yellow. After a great deal of difficulty, for the bird had taken notice of my eagerness, and had become extremely shy, I

succeeded in bringing it down; and found it to be a young bird of the same species with the one I had killed in the preceding May, but less advanced to its fixed colours; the wings entirely of a greenish yellow, and the rest of the plumage spotted in the most irregular manner, with red, yellow, brown, and greenish. This is the *variegated* Tanager, referred to in the synonymes prefixed to this article. Having, since that time, seen them in all their stages of colour, during their residence here, I have the more satisfaction in assuring the reader that the whole four species mentioned by Dr. Latham are one and the same. The two figures in our plate represent the male and female in their complete plumage, and of their exact size.

The food of these birds consists of various kinds of bugs, and large black beetles. In several instances I have found the stomach entirely filled with the broken remains of humble bees. During the season of whortle-berries they seem to subsist almost entirely on these berries; but in the early part of the season on insects of the above description. In Pennsylvania they are a rare species, having myself sometimes passed a whole summer without seeing one of them; while in New Jersey, even within half a mile of the shore opposite the city of Philadelphia, they may generally be found during the season.

The note of the male is a strong and sonorous whistle, resembling a loose trill or shake on the notes of a fife, frequently repeated; that of the female is rather a kind of chattering, approaching nearly to the *rapid* pronunciation of *chicky-tucky-tuck*, *chicky-tucky-tuck*, when she sees any person approaching the neighbourhood of her nest. She is, however, rarely seen, and usually mute, and scarcely to be distinguished from the colour of the foliage at a distance; while the loquacity and brilliant red of the male make him very conspicuous; and when seen among the green leaves, particularly if the light falls strongly on his plumage, he has a most beautiful and elegant appearance. It is worthy of remark, that the females of almost all our splendid feathered birds are drest in plain and often obscure colours, as if Providence meant to favour their personal concealment, and

consequently that of their nest and young from the depredations of birds of prey; while among the latter, such as Eagles, Owls, Hawks, &c. which are under no such apprehension, the females are uniformly covered with richer coloured plumage than the males.

The Summer Red-bird delights in a flat sandy country covered with wood, and interspersed with pine trees, and is consequently more numerous towards the shores of the Atlantic than in the interior. In both Carolinas, and in Georgia and Florida, they are in great plenty. In Mexico some of them are probably resident, or at least winter there; as many other of our summer visitants are known to do. In the northern states they are very rare; and I do not know that they have been found either in Upper or Lower Canada. Du Pratz, in his History of Louisiana, has related some particulars of this bird, which have been repeated by almost every subsequent writer on the subject, *viz.* that “it inhabits the woods on the Mississippi, and collects against winter a vast magazine of maize, which it carefully conceals with dry leaves, leaving only a small hole for entrance; and is so jealous of it, as never to quit its neighbourhood except to drink.” It is probable, though I cannot corroborate the fact, that individuals of this species may winter near the Mississippi; but that in a climate so moderate, and where such an exuberance of fruits, seeds, and berries are to be found, even during winter, this or any other bird should take so much pains in hoarding a vast quantity of Indian corn, and attach itself so closely to it, is rather apocryphal. The same writer, vol. ii, p. 24, relates similar particulars of the Cardinal Grosbeak (*Loxia Cardinalis*), which, though it winters in Pennsylvania, where the climate is much more severe, and where the length and rigors of that season would require a far larger magazine, and be a three-fold greater stimulus to hoarding, yet has no such habit here. Besides I have never found a single grain of Indian corn in the stomach of the Summer Red-bird; though I have examined many individuals of both sexes. On the whole, I consider this account of Du Pratz’s in much the same light with that of his country-

man Charlevoix, who gravely informs us, that the Owls of Canada lay up a store of live mice for winter, the legs of which they first break, to prevent them from running away, and then feed them carefully, and fatten them, till wanted for use.*

Its manners, though neither its bill nor tongue, partake very much of those of the Flycatcher; for I have frequently observed both male and female, a little before sunset, in parts of the forest clear of underwood, darting after winged insects, and continuing thus engaged till it was almost dusk.

* Travels in Canada, vol. I, p. 239. Lond. 1761, 8vo.

SPECIES 3. TANAGRA LUDOVICIANA.

LOUISIANA TANAGER.

[Plate XX.—Fig. 1.]

PEALE'S *Museum*, No. 6236.

THIS bird, and the two others that occupy the same plate, were discovered, in the remote regions of Louisiana, by an exploring party under the command of Captain George Merriwether Lewis, and Lieutenant, now General, William Clark, in their memorable expedition across the continent to the Pacific Ocean. They are entitled to a distinguished place in the pages of AMERICAN ORNITHOLOGY, both as being, till now, altogether unknown to naturalists, and as natives of what *is*, or at least *will* be, and that at no distant period, part of the western territory of the United States.

The frail remains of the bird now under consideration, as well as of the other two, have been set up by Mr. Peale, in his Museum, with as much neatness as the state of the skins would permit. Of three of these, which were put into my hands for examination, the most perfect was selected for the drawing. Its size and markings were as follow. Length six inches and a half; back, tail, and wings black; the greater wing-coverts tipped with yellow, the next superior row wholly yellow; neck, rump, tail-coverts and whole lower parts greenish yellow; forepart of the head to and beyond the eyes, light scarlet; bill yellowish horn colour; edges of the upper mandible ragged, as in the rest of its tribe; legs light blue; tail slightly forked, and edged with dull whitish: the whole figure about the size, and much resembling in shape, the Scarlet Tanager (Plate 11, fig. 3.); but evidently a different species, from the black back, and yellow coverts. Some of the feathers on the upper part of the back were

and before the middle of May appear in brilliant yellow: the whole plumage towards its roots is of a dusky bluish black.

The song of the Yellow-bird resembles that of the Goldfinch of Britain; but is in general so weak as to appear to proceed from a considerable distance, when perhaps the bird is perched on the tree over your head. I have, however, heard some sing in cages with great energy and animation. On their first arrival in Pennsylvania, in February, and until early in April, they associate in flocks, frequently assembling in great numbers on the same tree to bask and dress themselves in the morning sun, singing in concert for half an hour together; the confused mingling of their notes forming a kind of harmony not at all unpleasant.

About the last of November, and sometimes sooner, they *generally* leave Pennsylvania, and proceed to the south; some, however, are seen even in the midst of the severest winters. Their flight is not direct, but in alternate risings and sinkings, twittering as they fly, at each successive impulse of the wings. During the latter part of summer they are almost constant visitors in our gardens, in search of seeds, which they dislodge from the husk with great address, while hanging, frequently head downwards, in the manner of the Titmouse. From these circumstances, as well as from their colour, they are very generally known, and pass by various names expressive of their food, colour, &c. such as Thistle-bird, Lettuce-bird, Salad-bird, Yellow-bird, &c. &c. The gardeners who supply the city of Philadelphia with vegetables often take them in trap-cages, and expose them for sale in the market. They are easily familiarized to confinement, and feed with seeming indifference a few hours after being taken.

The great resemblance which the Yellow-bird bears to the Canary, has made many persons attempt to pair individuals of the two species together. An ingenious French gentleman who resides in Pottsgrove, Pennsylvania, assured me, that he had tried the male Yellow-bird with the female Canary, and the female Yellow-bird with the male Canary, but without effect,

GENUS 38. FRINGILLA. FINCH.

SPECIES 1. *F. TRISTIS*.

YELLOW-BIRD, OR GOLDFINCH.

[Plate I.—Fig. 2.]

LINN. *Syst.* 1, p. 320.—*Carduelis Americana*, BRISS. III, p. 64.—*Le Chardonneret jaune* BUFF. IV, p. 112. *Pl. Enl.* 202, f. 2.—*American Goldfinch*, ARCT. Zool. II, No. 242.—EWD. 274.—LATH. *Syn.* III, p. 288, 57. *Id. Sup.* p. 166.—BARTRAM, p. 290.—PEALE'S *Museum*, No. 6344.

THIS bird is four inches and a half in length, and eight inches in extent; of a rich lemon yellow, fading into white towards the rump and vent. The wings and tail are black, the former tipped and edged with white, the interior webs of the latter are also white; the fore part of the head is black; the bill and legs of a reddish cinnamon colour. This is the summer dress of the male; but in the month of September, the yellow gradually changes to a brown olive, and the male and female are then nearly alike. They build a very neat and delicately formed little nest, which they fasten to the twigs of an apple tree, or to the strong branching stalks of hemp, covering it on the outside with pieces of lichen, which they find on the trees and fences; these they glue together with their saliva, and afterwards line the inside with the softest downy substances they can procure. The female lays five eggs, of a dull white, thickly marked at the greater end; and they generally raise two broods in a season. The males do not arrive at their perfect plumage until the succeeding spring; wanting, during that time, the black on the head; and the white on the wings being of a cream colour. In the month of April they begin to change their winter dress,

SPECIES 2. FRINGILLA PURPUREA.

PURPLE FINCH.

[Plate VII.—Fig. 4, adult male.]

Fringilla purpurea, GMEL. *Syst.* I, 923.—*Bouvreuil violet de la Caroline*, BUFF. IV, 395.—*Purple Finch*, *Arct. Zool.* II, No. 258.—CATESB. I, 41.—LATH. *Syn.* III, 275, 39.—*Crimson-headed Finch*, *Arct. Zool.* II, No. 257.—LATHAM, *Syn.* III, 275, 39.—*Hemp-bird*, BARTRAM, 291. *Fringilla purpurea*, *Id.* 291.—PEALE'S *Museum*, No. 6504.

THIS is a winter bird of passage, coming to us in large flocks from the north, in September and October, great numbers remaining with us in Pennsylvania during the whole winter, feeding on the seeds of the poplar, button-wood, juniper, cedar; and on those of many rank weeds that flourish in rich bottoms, and along the margin of creeks. When the season is very severe they proceed to the south, as far at least as Georgia, returning north early in April. They now frequent the elm trees, feeding on the slender but sweet covering of the flowers; and as soon as the cherries put out their blossoms, feed almost exclusively on the stamina of the flowers; afterwards the apple blossoms are attacked in the same manner; and their depredations on these continue till they disappear, which is usually about the tenth or middle of May. I have been told that they sometimes breed in the northern parts of New York, but have never met with their nests. About the middle of September I found these birds numerous on Long Island, and round Newark, in New Jersey. They fly at a considerable height in the air, and their note is a single *chink* like that of the Rice-bird. They possess great boldness and spirit, and when caught bite violently, and hang by the bill from your hand, striking with great fury; but they are soon

reconciled to confinement, and in a day or two are quite at home. I have kept a pair of these birds upwards of nine months, to observe their manners. One was caught in a trap, the other was winged with the gun; both are now as familiar as if brought up from the nest by the hand, and seem to prefer hempseed and cherry blossoms to all other kinds of food. Both male and female, though not crested, are almost constantly in the habit of erecting the feathers of the crown; they appear to be of a tyrannical and domineering disposition, for they nearly killed an Indigo-bird, and two or three others that were occasionally placed with them, driving them into a corner of the cage, standing on them and tearing out their feathers, striking them on the head, munching their wings, &c. &c., till I was obliged to interfere; and even if called to, the aggressor would only turn up a malicious eye to me for a moment, and renew his outrage as before. They are a hardy vigorous bird. In the month of October, about the time of their first arrival, I shot a male, rich in plumage, and plump in flesh, but which wanted one leg, that had been taken off a little above the knee; the wound had healed so completely, and was covered with so thick a skin, that it seemed as though it had been so for years. Whether this mutilation was occasioned by a shot, or in party quarrels of its own, I could not determine; but our invalid seemed to have used his stump either in hopping or resting, for it had all the appearance of having been brought in frequent contact with other bodies harder than itself.

This bird is a striking example of the truth of what I have frequently repeated in this work, that in many instances the same bird has been more than once described by the same person as a different species; for it is a fact which time will establish, that the Crimson-headed Finch of Pennant and Latham, the Purple Finch of the same and other naturalists, the Hempbird of Bartram, and the *Fringilla rosea* of Pallas, are one and the same, *viz.* the Purple Finch, the subject of the present article.

The Purple Finch is six inches in length and nine in extent; head, neck, back, breast, rump, and tail coverts, dark crimson,

deepest on the head and chin, and lightest on the lower part of the breast; the back is streaked with dusky; the wings and tail are also dusky black, edged with reddish; the latter a good deal forked; round the base of the bill the recumbent feathers are of a light clay or cream colour; belly and vent white; sides under the wings streaked with dull reddish; legs a dirty purplish flesh colour; bill short, strong, conical, and of a dusky horn colour; iris dark hazle; the feathers covering the ears are more dusky red than the other parts of the head. This is the male, when arrived at its full colours. The female is nearly of the same size, of a brown olive or flaxen colour, streaked with dusky black; the head seamed with lateral lines of whitish; above and below the hind part of the ear feathers, are two streaks of white; the breast is whitish, streaked with a light flax colour; tail and wings as in the male, only both edged with dull brown instead of red; belly and vent white. This is also the colour of the young during the first, and to at least the end of the second, season, when the males begin to become lighter yellowish, which gradually brightens to crimson; the female always retains nearly the same appearance. The young male bird of the first year may be distinguished from the female by the tail of the former being edged with olive green, that of the latter with brown. A male of one of these birds which I kept for some time, changed in the month of October, from red to greenish yellow, but died before it recovered its former colour.

FRINGILLA PURPUREA.

PURPLE FINCH.

[Plate XLII.—Fig. 3, male in winter plumage.]

THIS bird is represented as he appears previous to receiving his crimson plumage, and also when moulting. By recurring to pl. 7, fig. 4, which exhibits him in his full dress, the great difference of colour will be observed to which this species is annually subject.

It is matter of doubt with me whether this species ought not to be classed with *Loxia*; the great thickness of the bill, and similarity that prevails between this and the Pine Grosbeak, almost induced me to adopt it into that class. But respect for other authorities has prevented me from making this alteration.

When these birds are taken in their crimson dress, and kept in a cage till they moult their feathers, they uniformly change to their present appearance, and sometimes never after receive their red colour. They are also subject, if well fed, to become so fat as literally to die of corpulency, of which I have seen several instances; being at these times subject to something resembling apoplexy, from which they sometimes recover in a few minutes, but oftener expire in the same space of time.

The female is entirely without the red, and differs from the present only in having less yellow about her.

These birds regularly arrive from the north, where they breed, in September; and visit us from the south again early in April, feeding on the cherry blossoms as soon as they appear.

The individual figured in the plate measured six inches and a quarter in length, and ten inches in extent; the bill was horn coloured; upper parts of the plumage brown olive strongly

tinged with yellow, particularly on the rump, where it was brownish yellow; from above the eye, backwards, passed a streak of white, and another more irregular one from the lower mandible; feathers of the crown narrow, rather long, and generally erected, but not so as to form a crest; nostrils and base of the bill covered with reflected brownish hairs; eye dark hazel; wings and tail dark blackish brown, edged with olive; first and second row of coverts tipped with pale yellow; chin white; breast pale cream, marked with pointed spots of deep olive brown; belly and vent white; legs brown. This bird, with several others marked nearly in the same manner, was shot, April twenty-fifth, while engaged in eating the buds from the beech tree.

SPECIES 3. FRINGILLA PUSILLA.

FIELD SPARROW.

[Plate XVI.—Fig. 2.]

Passer agrestis, BARTRAM, p. 291.—PEALE'S *Museum*, No. 6560.

THIS is the smallest of all our Sparrows, and in Pennsylvania is generally migratory. It arrives early in April, frequents dry fields covered with long grass, builds a small nest on the ground, generally at the foot of a briar, lines it with horse hair; lays six eggs so thickly sprinkled with ferruginous as to appear altogether of that tint; and raises two and often three, broods in a season. It is more frequently found in the middle of fields and orchards than any of the other species, which usually lurk along hedge rows. It has no song; but a kind of chirruping not much different from the chirpings of a cricket. Towards Fall they assemble in loose flocks in orchards and corn-fields, in search of the seeds of various rank weeds; and are then very numerous. As the weather becomes severe, with deep snow, they disappear. In the lower parts of North and South Carolina I found this species in multitudes in the months of January and February. When disturbed they take to the bushes, clustering so close together that a dozen may easily be shot at a time. I continued to see them equally numerous through the whole lower parts of Georgia; from whence, according to Mr. Abbot, they all disappear early in the spring.

None of our birds have been more imperfectly described than that family of the Finch tribe usually called Sparrows. They have been considered as too insignificant for particular notice, yet they possess distinct characters, and some of them peculiarities, well worthy of notice. They are innocent in their habits, subsisting chiefly on the small seeds of wild plants, and sel-

dom injuring the property of the farmer. In the dreary season of winter some of them enliven the prospect by hopping familiarly about our doors, humble pensioners on the sweepings of the threshold.

The present species has never before, to my knowledge, been figured. It is five inches and a quarter long, and eight inches broad; bill and legs a reddish cinnamon colour; upper part of the head deep chestnut, divided by a slight streak of drab widening as it goes back; cheeks, line over the eye, breast and sides under the wings a brownish clay colour, lightest on the chin, and darkest on the ear feathers; a small streak of brown at the lower angle of the bill; back streaked with black, drab, and bright bay, the latter being generally centered with the former; rump dark drab, or cinereous; wings dusky black, the primaries edged with whitish, the secondaries bordered with bright bay; greater wing coverts black, edged and broadly tipped with brownish white; tail dusky black, edged with clay colour: male and female nearly alike in plumage; the chestnut on the crown of the male rather brighter.

SPECIES 4. *FRINGILLA ARBOREA*.*

TREE SPARROW.

[Plate XVI.—Fig. 3.]

Le Soulciet, BUFF. III, 500.—*Moineau de Canada*, BRISS. III, 101.
Pl. Enl. 223.—LATH. II, 252.—EDW. 269.—*Arct. Zool.* p. 373,
No. 246.—PEALE'S *Museum*, No. 6575.

THIS Sparrow is a native of the north, who takes up his winter quarters in Pennsylvania, and most of the northern states, as well as several of the southern ones. He arrives here about the beginning of November; and leaves us again early in April; associates in flocks with the Snow-birds, frequents sheltered hollows, thickets, and hedge-rows, near springs of water; and has a low warbling note, scarcely audible at the distance of twenty or thirty yards. If disturbed takes to trees, like the White-throated Sparrow, but contrary to the habit of most of the others, who are inclined rather to dive into thickets. Edwards erroneously represented this as the female of the Mountain Sparrow; but that judicious and excellent naturalist, Pennant, has given a more correct account of it, and informs us, that it inhabits the country bordering on Hudson's bay during summer; comes to Severn settlement in May; advances farther north to breed; and returns in autumn on its way southward. It also visits Newfoundland.†

* The specific name, *canadensis*, given by BRISSON and adopted by LATHAM, must be restored to this bird. The following synonymes may be quoted. *Fringilla monticola*, GMEL. *Syst.* I, p. 912.—*Passer Canadensis*, BRISS. III, p. 102. 15.—*Id.* 8vo. I, p. 335.—*Mountain Finch*, LATH. *Syn.* III, p. 265. 16.—*Fringilla canadensis*, LATH. *Ind. Orn.* I, p. 434.

† *Arct. Zool.* vol. II, p. 373.

By some of our own naturalists this species has been confounded with the Chipping Sparrow (fig. 5), which it very much resembles; but is larger and handsomer; and is never found with us in summer. The former departs for the south about the same time that the latter arrives from the north; and from this circumstance, and their general resemblance, has arisen the mistake.

The Tree Sparrow is six inches and a half long, and nine and a half in extent; the whole upper part of the head is of a bright reddish chestnut, sometimes slightly skirted with gray; from the nostrils over the eye passes a white strip fading into pale ash as it extends back; sides of the neck, chin and breast very pale ash; the centre of the breast marked with an obscure spot of dark brown; from the lower angle of the bill proceeds a slight streak of chestnut; sides under the wings pale brown; back handsomely streaked with pale drab, bright bay and black; lower part of the back and rump brownish drab; lesser wing coverts black, edged with pale ash; wings black, broadly edged with bright bay; the first and second row of coverts tipped with pure white; tail black, forked, and exteriorly edged with dull white; belly and vent brownish white; bill black above, yellow below; legs a brownish clay colour; feet black. The female is about half an inch shorter; the chestnut or bright bay on the wings, back and crown is less brilliant; and the white on the coverts narrower, and not so pure. These are all the differences I can perceive.

SPECIES 5. FRINGILLA MELODIA.

SONG SPARROW.

[Plate XVI.—Fig. 4.]

Fasciated Finch? *Arct. Zool.* p. 375, No. 252.—PEALE'S *Museum*,
No. 6573.

So nearly do many species of our Sparrows approximate to each other in plumage, and so imperfectly have they been taken notice of, that it is absolutely impossible to say, with certainty, whether the present species has ever been described or not. And yet, of all our Sparrows, this is the most numerous, the most generally diffused over the United States, and by far the earliest, sweetest, and most lasting songster. It may be said to be partially migratory, many passing to the south in the month of November; and many of them still remaining with us, in low close sheltered meadows and swamps, during the whole of winter. It is the first singing bird in spring, taking precedence even of the Pewee and Blue-bird. Its song continues occasionally during the whole summer and fall; and is sometimes heard even in the depth of winter. The notes, or chant, are short but very sweet, resembling the beginning of the Canary's song, and frequently repeated, generally from the branches of a bush or small tree, where it sits chanting for an hour together. It is fond of frequenting the borders of rivers, meadows, swamps, and such like watery places; and if wounded, and unable to fly, will readily take to the water, and swim with considerable rapidity. In the great cypress swamps of the southern states in the depth of winter, I observed multitudes of these birds mixed with several other species; for these places appear to be the grand winter rendezvous of almost all our Sparrows. I have found this bird in every district of the United States from Ca-

nada to the southern boundaries of Georgia; but Mr. Abbot informs me, that he knows of only one or two species that remain in that part of Georgia during the summer.

The Song Sparrow builds in the ground, under a tuft of grass; the nest is formed of fine dry grass, and lined with horse hair; the eggs are four or five, thickly marked with spots of reddish brown on a white, sometimes bluish white ground; if not interrupted, he raises three broods in the season. I have found his nest with young as early as the twenty-sixth of April, and as late as the twelfth of August. What is singular, the same bird often fixes his nest in a cedar tree, five or six feet from the ground. Supposing this to have been a *variety*, or different species, I have examined the bird, nest and eggs, with particular care, several times; but found no difference. I have observed the same accidental habit in the Red-winged Blackbird, which sometimes builds among the grass, as well as on alder bushes.

This species is six inches and a half long, and eight and a half in extent; upper part of the head dark chestnut, divided, laterally, by a line of pale dirty white; spot at each nostril yellow ochre; line over the eye inclining to ash; chin white; streak from the lower mandible, slit of the mouth, and posterior angle of the eye, dark chestnut; breast and sides under the wings thickly marked with long pointed spots of dark chestnut, centered with black, and running in chains; belly white; vent yellow ochre, streaked with brown; back streaked with black, bay, and pale ochre; tail brown, rounded at the end, the two middle feathers streaked down their centres with black; legs flesh coloured; wing coverts black, broadly edged with bay, and tipped with yellowish white; wings dark brown. The female is scarcely distinguishable by its plumage from the male. The bill in both horn coloured.

SPECIES 6. FRINGILLA SOCIALIS.

CHIPPING SPARROW.

[Plate XVI.—Fig. 5.]

Passer domesticus, the little *House Sparrow*, or *Chipping-bird*,
BARTRAM, p. 291.—PEALF'S *Museum*, No. 6571.

THIS species, though destitute of the musical talents of the former, is perhaps more generally known, because more familiar and even domestic. He inhabits, during summer, the city, in common with man, building in the branches of the trees with which our streets and gardens are ornamented; and glean- ing up crumbs from our yards, and even our doors, to feed his more advanced young with. I have known one of these birds attend regularly every day, during a whole summer, while the family were at dinner, under a piazza, fronting the garden, and pick up the crumbs that were thrown to him. This sociable habit, which continues chiefly during the summer, is a singular characteristic. Towards the end of summer he takes to the fields, and hedges, until the weather becomes severe, with snow, when he departs for the south.

The Chipping-bird builds his nest most commonly in a cedar bush, and lines it thickly with cow-hair. The female lays four or five eggs of a light blue colour, with a few dots of purplish black near the great end.

This species may easily be distinguished from the four preceding ones, by his *black bill and frontlet*, and by his familiarity in summer; yet, in the month of August and September, when they moult, the black on the front and partially on the bill disappears. The young are also without the black during the first season.

The Chipping Sparrow is five inches and a quarter long, and eight inches in extent; frontlet black; chin and line over the eye whitish; crown chestnut; breast and sides of the neck pale ash; bill in winter black, in summer the lower mandible flesh coloured; rump dark ash; belly and vent white; back variegated with black and bright bay; wings black, broadly edged with bright chestnut; tail dusky, forked, and slightly edged with pale ochre; legs and feet a pale flesh colour. The female differs in having less black on the frontlet, and the bay duller. Both lose the black front in moulting.

*SPECIES 7. FRINGILLA HUDSONIA.**

SNOW-BIRD.

[Plate XVI.—Fig. 6.]

Fringilla Hudsonia, TURTON, *Syst.* 1, 568.—*Emberiza hyemalis*,
Id. 531.—LATH. 1, 66.—CATESBY, 1, 36.—*Arct. Zool.* p. 359, No.
223.—*Passer nivalis*, BARTRAM, p. 291.—PEALE'S *Museum*,
No. 6532.

THIS well known species, small and insignificant as it may appear, is by far the most numerous, as well as the most extensively disseminated, of all the feathered tribes that visit us from the frozen regions of the north. Their migrations extending from the arctic circle, and probably beyond it, to the shores of the gulf of Mexico, sreading over the whole breadth of the United States from the Atlantic ocean to Louisiana; how much farther westward I am unable to say. About the twentieth of October they make their first appearance in those parts of Pennsylvania east of the Alleghany mountains. At first they are most generally seen on the borders of woods among the falling and decayed leaves, in loose flocks of thirty or forty together, always taking to the trees when disturbed. As the weather sets in colder they approach nearer the farm-house and villages; and on the appearance of what is usually called *falling weather*, assemble in larger flocks, and seem doubly diligent in searching for food. This increased activity is generally a sure prognostic of a storm. When deep snow covers the ground they become almost half domesticated. They collect about the barn, stables, and other outhouses, spread over the yard, and even round the steps of the door; not only in the country and villages, but in the heart of our large cities; crowding around the threshold

* *Fringilla hyemalis*, LINN. *Syst. Ed.* 10, 1, p. 183, 30.

early in the morning, gleaning up the crumbs; appearing very lively and familiar. They have also recourse, at this severe season, when the face of the earth is shut up from them, to the seeds of many kinds of weeds that still rise above the snow, in corners of fields, and low sheltered situations along the borders of creeks and fences, where they associate with several species of Sparrows, particularly those represented on the same plate. They are at this time easily caught with almost any kind of traps; are generally fat, and, it is said, are excellent eating.

I cannot but consider this bird as the most numerous of its tribe of any within the United States. From the northern parts of the district of Maine, to the Ogechee river in Georgia, a distance by the circuitous route in which I travelled of more than 1800 miles, I never passed a day, and scarcely a mile, without seeing numbers of these birds, and frequently large flocks of several thousands. Other travellers, with whom I conversed, who had come from Lexington in Kentucky, through Virginia, also declared that they found these birds numerous along the whole road. It should be observed, that the road sides are their favourite haunts, where many rank weeds that grow along the fences furnish them with food, and the road with gravel. In the vicinity of places where they were most numerous, I observed the small Hawk, represented in the same plate, and several others of his tribe, watching their opportunity, or hovering cautiously around, making an occasional sweep among them, and retiring to the bare branches of an old cypress to feed on their victim. In the month of April, when the weather begins to be warm, they are observed to retreat to the woods; and to prefer the shaded sides of hills and thickets; at which time the males warble out a few very low sweet notes; and are almost perpetually pursuing and fighting with each other. About the twentieth of April they take their leave of our humble regions, and retire to the north, and to the high ranges of the Alleghany to build their nests, and rear their young. In some of those ranges, in the interior of Virginia, and northward about the

waters of the west branch of the Susquehanna, they breed in great numbers. The nest is fixed in the ground or among the grass, sometimes several being within a small distance of each other. According to the observations of the gentlemen residing at Hudson's bay factory, they arrive there about the beginning of June, stay a week or two, and proceed farther north to breed. They return to that settlement in the autumn on their way to the south.

In some parts of New England I found the opinion pretty general, that the Snow-bird in summer is transformed into the small Chipping Sparrow, which we find so common in that season, and which is represented in the same plate. I had convinced a gentleman of New York of his mistake in this matter, by taking him to the house of a Mr. Gautier, there, who amuses himself by keeping a great number of native as well as foreign birds. This was in the month of July, and the Snow-bird appeared there in the same coloured plumage he usually has. Several individuals of the Chipping Sparrow were also in the same apartment. The evidence was therefore irresistible; but as I had not the same proofs to offer to the eye in New England, I had not the same success.

There must be something in the temperature of the blood or constitution of this bird which unfits it for residing, during summer, in the lower parts of the United States; as the country here abounds with a great variety of food, of which, during its stay here, it appears to be remarkably fond. Or, perhaps, its habit of associating in such numbers to breed, and building its nest with so little precaution, may, to ensure its safety, require a solitary region, far from the intruding footsteps of man.

The Snow-bird is six inches long, and nine in extent, the head, neck, and upper parts of the breast, body and wings, are of a deep slate colour; the plumage sometimes skirted with brown, which is the colour of the young birds; the lower parts of the breast, the whole belly and vent, are pure white; the three secondary quill feathers next the body are edged with brown, the primaries with white; the tail is dusky slate, a little

forked, the two exterior feathers wholly white, which are flir-
ted out as it flies, and appear then very prominent; the bill and
legs are of a reddish flesh colour; the eye bluish black. The fe-
male differs from the male in being considerably more brown.
In the depth of winter the slate colour of the male becomes
more deep and much purer, the brown disappearing nearly alto-
gether.

SPECIES 8. FRINGILLA PINUS.

PINE FINCH.

[Plate XVII.—Fig. 1.]

PEALE'S *Museum*, No. 6577.

THIS little northern stranger visits us in the month of November, and seeks the seeds of the black alder, on the borders of swamps, creeks and rivulets. As the weather becomes more severe, and the seeds of the *Pinus canadensis* are fully ripe, these birds collect in larger flocks and take up their residence, almost exclusively, among these trees. In the gardens of Bush-hill, in the neighbourhood of Philadelphia, a flock of two or three hundred of these birds have regularly wintered many years; where a noble avenue of pine trees, and walks covered with fine white gravel, furnish them with abundance through the winter. Early in March they disappear, either to the north, or to the pine woods that cover many lesser ranges of the Alleghany. While here they are often so tame as to allow you to walk within a few yards of the spot where a whole flock of them are sitting. They flutter among the branches, frequently hanging by the cones, and uttering a note almost exactly like that of the Goldfinch (*F. tristis*). I have not a doubt but this bird appears in a richer dress in summer in those places where he breeds, as he has so very great a resemblance to the bird above mentioned, with whose changes we are well acquainted.

The length of this species is four inches, breadth eight inches; upper part of the head, the neck and back, a dark flaxen colour, streaked with black; wings black, marked with two rows of dull white or cream colour; whole wing quills, under the coverts, rich yellow, appearing even when the wings are shut; rump and tail coverts yellowish, streaked with dark brown; tail

feathers rich yellow from the roots half way to the tips, except the two middle ones, which are blackish brown, slightly edged with yellow; sides under the wings of a cream colour, with long streaks of black; breast a light flaxen colour, with small streaks or pointed spots of black; legs purplish brown; bill a dull horn colour; eyes hazel. The female was scarcely distinguishable by its plumage from the male. The New York Siskin of Pennant* appears to be only the Yellow-bird (*Frin-gilla tristis*) in his winter dress.

This bird has a still greater resemblance to the Siskin of Europe (*F. spinus*), and may perhaps be the species described by Turton,† as the Black Mexican Siskin, which he says is varied above with black and yellowish, and is white beneath, and which is also said to sing finely. This change from flaxen to yellow is observable in the Goldfinch; and no other two birds of our country resemble each other more than these do in their winter dresses. Should these surmises be found correct, a figure of this bird in his summer dress shall appear in some future part of our work.

* Arct. Zool. p. 372. No. 243.

† Turton, vol. i, p. 560.

*SPECIES 9. FRINGILLA ALBICOLLIS.**

WHITE-THROATED SPARROW.

[Plate XXII.—Fig. 2.]

Fringilla fusca, BARTRAM, p. 291.—LATH. II, 272.—EDWARDS, 304.—*Arct. Zool.* p. 373, No. 248.—PEALE'S *Museum*, No. 6486.

THIS is the largest as well as handsomest of all our Sparrows. It winters with the preceding species and several others in most of the states south of New England. From Connecticut to Savannah I found these birds numerous, particularly in the neighbourhood of the Roanoke river, and among the rice plantations. In summer they retire to the higher inland parts of the country, and also farther north to breed. According to Pennant they are also found at that season in Newfoundland. During their residence here in winter, they collect together in flocks, always preferring the borders of swampy thickets, creeks, and millponds, skirted with alder bushes and long rank weeds, the seeds of which form their principal food. Early in spring, a little before they leave us, they have a few remarkably sweet and clear notes, generally in the morning a little after sun rise. About the twentieth of April they disappear, and we see no more of them till the beginning or second week of October, when they again return; part to pass the winter with us; and part on their route farther south.

The length of the White-throated Sparrow is six inches and a half, breadth nine inches; the upper part of the back and the lesser wing coverts are beautifully variegated with black, bay, ash and light brown; a stripe of white passes from the base of the upper mandible to the hind head; this is bordered on each

* *Fringilla pennsylvanica*, LATH. *Ind. Orn.* I, p. 445.—*Passer pennsylvanicus*, BRISS. *app.* p. 77.—*Id.* 8vo. I, p. 367.

side with a stripe of black; below this again is another of white passing over each eye, and deepening into orange yellow between that and the nostril; this is again bordered by a stripe of black proceeding from the hind part of the eye; breast ash; chin, belly, and vent white; tail somewhat wedged; legs flesh coloured; bill a bluish horn colour; eye hazel. In the female the white stripe on the crown is a light drab; the breast not so dark; the chin less pure; and the line of yellow before the eye scarce half as long as in the male. All the parts that are white in the male are in the female of a light drab colour.

SPECIES 10. FRINGILLA PALUSTRIS.

SWAMP SPARROW.

[Plate XXII.—Fig. 1.]

Passer palustris, BARTRAM, p. 291.—PEALE'S *Museum*, No. 6569.

THE history of this obscure and humble species is short and uninteresting. Unknown or overlooked by the naturalists of Europe it is now for the first time introduced to the notice of the world. It is one of our summer visitants, arriving in Pennsylvania early in April, frequenting low grounds, and river courses; rearing two, and sometimes three broods in a season; and returning to the south as the cold weather commences. The immense cypress swamps and extensive grassy flats of the southern states, that border their numerous rivers, and the rich rice plantations abounding with their favourite seeds and sustenance, appear to be the general winter resort, and grand annual rendezvous, of this and all other species of Sparrow that remain with us during summer. From the river Trent in North Carolina, to that of Savannah, and still farther south, I found this species very numerous; not flying in flocks, but skulking among the canes, reeds, and grass, seeming shy and timorous, and more attached to the water than any other of their tribe. In the month of April numbers pass through Pennsylvania to the northward, which I conjecture from the circumstance of finding them at that season in particular parts of the woods, where during the rest of the year they are not to be seen. The few that remain frequent the swamps, and reedy borders of our creeks and rivers. They form their nest in the ground, sometimes in a tussock of rank grass, surrounded by water, and lay four eggs of a dirty white, spotted with rufous. So late as the fifteenth of August, I have seen them feeding their young that were scarce-

ly able to fly. Their principal food is grass seeds, wild oats, and insects. They have no song; are distinguished by a single chip or *cheep*, uttered in a rather hoarser tone than that of the Song Sparrow; flirt the tail as they fly; seldom or never take to the trees, but skulk from one low bush or swampy thicket to another.

The Swamp Sparrow is five inches and a half long, and seven inches and a half in extent; the back of the neck and front are black; crown bright bay, bordered with black; a spot of yellowish white between the eye and nostril; sides of the neck and whole breast dark ash; chin white; a streak of black proceeds from the lower mandible, and another from the posterior angle of the eye; back black, slightly skirted with bay; greater coverts also black, edged with bay; wings and tail plain brown; belly and vent brownish white; bill dusky above, bluish below; eyes hazel; legs brown; claws strong and sharp for climbing the reeds. The female wants the bay on the crown, or has it indistinctly; over the eye is a line of dull white.

SPECIES 11. FRINGILLA MARITIMA.

SEA-SIDE FINCH.

[Plate XXXIV.—Fig. 2.]

Of this bird I can find no description. It inhabits the low, rush-covered sea islands along our Atlantic coast, where I first found it; keeping almost continually within the boundaries of tide water, except when long and violent east or north-easterly storms, with high tides, compel it to seek the shore. On these occasions it courses along the margin, and among the holes and interstices of the weeds and sea-wrack, with a rapidity equalled only by the nimblest of our Sandpipers, and very much in their manner. At these times also it roosts on the ground, and runs about after dusk.

This species derives its whole subsistence from the sea. I examined a great number of individuals by dissection, and found their stomachs universally filled with fragments of shrimps, minute shell fish, and broken limbs of small sea crabs. Its flesh, also, as was to be expected, tasted of fish, or was what is usually termed *sedgy*. Amidst the recesses of these wet sea marches it seeks the rankest growth of grass, and sea weed, and climbs along the stalks of the rushes with as much dexterity as it runs along the ground, which is rather a singular circumstance, most of our climbers being rather awkward at running.

The Sea-side Finch is six inches and a quarter long, and eight and a quarter in extent; chin pure white, bordered on each side by a stripe of dark ash, proceeding from each base of the lower mandible, above that is another slight streak of white; from the nostril over the eye extends another streak which immediately over the lores is rich yellow, bordered above with white, and ending in yellow olive; crown brownish olive, divided laterally

by a stripe of slate blue, or fine light ash; breast ash, streaked with buff; belly white; vent buff-coloured, and streaked with black; upper parts of the back, wings and tail a yellowish brown olive; intermixed with very pale blue; greater and lesser coverts tipt with dull white; edge of the bend of the wing rich yellow; primaries edged with the same immediately below their coverts; tail cuneiform, olive brown, centered with black; bill dusky above, pale blue below, longer than is usual with Finches; legs and feet a pale bluish white; irides hazel. Male and female nearly alike in colour.

SPECIES 12. *FRINGILLA CAUDACUTA.*

SHARP-TAILED FINCH.

[Plate XXXIV.—Fig. 3.]

Sharp-tailed Oriole, LATH. *Gen. Syn.* II, p. 448, pl. XVII.—
PEALE'S *Museum*, No. 6442.

A BIRD of this denomination is described by Turton, *Syst.* p. 562, but which by no means agrees with the present. This however, may be the fault of the describer, as it is said to be a bird of Georgia; unwilling, therefore, to multiply names unnecessarily, I have adopted his appellation. In some future part of the work I shall settle this matter with more precision.

This new (as I apprehend it) and beautiful species as an associate of the former, inhabits the same places, lives on the same food; and resembles it so much in manners, that but for their dissimilarity in some essential particulars, I would be disposed to consider them as the same in a different state of plumage. They are much less numerous than the preceding, and do not run with equal celerity.

The Sharp-tailed Finch is five inches and a quarter long, and seven inches and a quarter in extent; bill dusky; auriculars ash; from the bill over the eye, and also below it, run two broad stripes of brownish orange; chin whitish; breast pale buff, marked with small pointed spots of black; belly white; vent reddish buff; from the base of the upper mandible a broad stripe of pale ash runs along the crown and hind head, bordered on each side by one of blackish brown; back a yellowish brown olive, some of the feathers curiously edged with semicircles of white; sides under the wings buff, spotted with black; wing coverts and tertials black, broadly edged with light reddish buff; tail cuneiform,

short; all the feathers sharp pointed; legs a yellow clay colour; irides hazel.

I examined many of these birds, and found but little difference in the colour and markings of their plumage.

Since writing the above, I have become convinced that the bird described by Mr. Latham, under the name of Sharp-tailed Oriole, (*Oriolus caudacutus*), is the present species. Latham states, that his description and figure were taken from a specimen deposited in Mrs. Blackburn's collection, and that it came from New York.

SPECIES 13. FRINGILLA SAVANNA.

SAVANNAH FINCH.

[Plate XXXIV.—Fig. 4, *Male.*]

PEALE'S *Museum*, No. 6583.

THE figure of this delicately marked Sparrow was drawn from a very beautiful male, and is a faithful representation of the original.

The length is five and a half inches, extent eight and a half; bill pale brown; eyebrows Naples yellow; breast and whole lower parts pure white, the former marked with small pointed spots of brown; upper parts a pale whitish drab, mottled with reddish brown; wing-coverts edged and tipped with white; tertials black, edged with white and bay; legs pale clay; ear feathers tinged with Naples yellow. The female and young males are less and much darker.

This is probably the most timid of all our Sparrows. In winter it frequents the sea shores; but as spring approaches migrates to the interior, as I have lately discovered, building its nest in the grass nearly in the same form, though with fewer materials, as that of the Bay-winged Bunting. On the twenty-third of May I found one of these at the root of a clump of rushes in a grass field, with three young, nearly ready to fly. The female counterfeited lameness, spreading her wings and tail, and using many affectionate stratagems to allure me from the place. The eggs I have never seen.

FRINGILLA SAVANNA.

SAVANNAH SPARROW.

[Plate XXII.—Fig. 3.—*Female.*]

PEALE'S *Museum*, No. 6584.

THIS new species is an inhabitant of the low countries on the Atlantic coast, from Savannah, where I first discovered it, to the State of New York; and is generally resident in these places, though rarely found inland, or far from the sea shore. The drawing of this bird was in the hands of the engraver before I was aware that the male was so much its superior in beauty of markings and in general colours. With the representation of the male are given particulars of their nest, eggs, and manners. I have found these birds numerous on the sea shore, in the state of New Jersey, particularly near Great Egg harbour. A pair of these I presented to Mr. Peale of this city, in whose noble collection they now occupy a place.

The female of the Savannah Sparrow is five inches and a half long, and eight and a half in extent; the plumage of the back is mottled with black, bright bay and whitish; chin white; breast marked with pointed spots of black, edged with bay, running in chains from each base of the lower mandible; sides touched with long streaks of the same; temples marked with a spot of delicate yellow; ear feathers slightly tinged with the same; belly white, and a little streaked; inside of the shoulders and lining of the wing pale yellowish; first and second rows of wing coverts tipped with whitish; secondaries next the body pointed and very black, edged also with bay; tail slightly forked, and without any white feathers; legs pale flesh colour; hind claw pretty long.

The very slight distinctions of colour which nature has drawn between many distinct species of this family of Finches, render these minute and tedious descriptions absolutely necessary, that the particular species may be precisely discriminated.

SPECIES 14. FRINGILLA FERRUGINEA.*

FOX-COLOURED SPARROW.

[Plate XXII.—Fig. 4.]

Rusty Bunting, *Arct. Zool.* p. 364, No. 231. *Ib.* 233.—*Ferruginous Finch*, *Ib.* 375, No. 251.—*Fringilla rufa*, BARTRAM, p. 291.—*PEALE'S Museum*, No. 6092.

THIS plump and pretty species arrives in Pennsylvania from the north about the twentieth of October; frequents low sheltered thickets; associates in little flocks of ten or twelve, and is almost continually scraping the ground, and rustling among the fallen leaves. I found this bird numerous in November among the rich cultivated flats that border the river Connecticut; and was informed that it leaves those places in spring. I also found it in the northern parts of the state of Vermont. Along the borders of the great reed and cypress swamps of Virginia, and North and South Carolina, as well as around the rice plantations, I observed this bird very frequently. They also inhabit Newfoundland.† They are rather of a solitary nature, seldom feeding in the open fields; but generally under thickets, or among tall rank weeds on the edges of fields. They sometimes associate with the Snow-bird, but more generally keep by themselves. Their manners very much resemble those of the Red-eyed Bunting (Plate X, fig. 4.); they are silent, tame, and unsuspicious. They have generally no other note while here than a *shep*, *shep*; yet I suspect they have some song in the places where

* *Fringilla iliaca*, MERREM, *Beytr.* II, p. 40. t. 10.—GMEL. I, p. 923.—LATH. *Ind. Orn.* I, p. 438.—*Fringilla ferruginea*, GMEL. *Syst.* I, p. 921.—LATH. *Syn.* III, p. 272. 31.—*Ibid.* *Ind. Orn.* I, p. 445.

† PENNANT.

they breed; for I once heard a single one, a little before the time they leave us, warble out a few very sweet low notes.

The Fox-coloured Sparrow is six inches long, and nine and a quarter broad; the upper part of the head and neck is cinereous, edged with rust colour; back handsomely mottled with reddish brown and cinereous; wings and tail bright ferruginous; the primaries dusky within and at the tips, the first and second rows of coverts, tipped with white; breast and belly white; the former, as well as the ear feathers, marked with large blotches of bright bay, or reddish brown, and the beginning of the belly with little arrow-shaped spots of black; the tail coverts and tail are a bright fox colour; the legs and feet a dirty brownish white, or clay colour, and very strong; the bill is strong, dusky above and yellow below; iris of the eye hazel. The chief difference in the female is that the wings are not of so bright a bay, inclining more to a drab; yet this is scarcely observable, unless by a comparison of the two together. They are generally very fat, live on grass seeds, eggs of insects, and gravel.

SPECIES 15. FRINGILLA LINARIA.

LESSER RED-POLL.

[Plate XXX.—Fig. 4.]

LATH. II, 305.—*Arct. Zool.* 379.—*Le Sizeren*, BUFF. IV, 216.—
PEALE'S *Museum*, No. 6579.

THIS bird corresponds so exactly in size, figure and colour of plumage with that of Europe, of the same name, as to place their identity beyond a doubt. They inhabit during summer the most northern parts of Canada and still more remote northern countries, from whence they migrate at the commencement of winter. They appear in the Genesee country with the first deep snow, and on that account are usually called by the title of Snow-birds. As the female is destitute of the crimson on the breast and forehead, and the young birds do not receive that ornament till the succeeding spring, such a small proportion of the individuals that form these flocks are marked with red, as to induce a general belief among the inhabitants of those parts that they are two different kinds associated together. Flocks of these birds have been occasionally seen in severe winters in the neighbourhood of Philadelphia. They seem particularly fond of the seeds of the common alder, and hang head downwards while feeding, in the manner of the Yellow-bird. They seem extremely unsuspicious at such times, and will allow a very near approach without betraying any symptoms of alarm.

The specimen represented in the plate was shot, with several others of both sexes, in Seneca county, between the Seneca and Cayuga lakes. Some individuals were occasionally heard to chant a few interrupted notes, but no satisfactory account can be given of their powers of song.

This species extends throughout the whole northern parts of Europe, is likewise found in the remote wilds of Russia; was seen by Steller in Kamtschatka; and probably inhabits corresponding climates round the whole habitable parts of the northern hemisphere. In the highlands of Scotland they are common, building often on the tops of the heath, sometimes in a low furze bush, like the common Linnet; and sometimes on the ground. The nest is formed of light stalks of dried grass, intermixed with tufts of wool, and warmly lined with feathers. The eggs are usually four, white, sprinkled with specks of reddish.

NOTE.

Fringilla Linaria, GMEL. *Syst.* 1, p. 917, 29. *F. flavirostris*, Id. p. 915, 27.—LATH. *Ind. Orn.* p. 458, No. 16, p. 458, No. 83.—*Le Cabaret*, BUFF. *Ois.* IV, p. 76. *Pl. Enl.* 485.—BEWICK, 1, p. 191.—*Fauna Orcadensis*, p. 64, 3.—*Gros-bec Sizerin*, TEMM. *Man. d'Orn.* p. 373.

CONTRARY to the usual practice of Wilson, he omitted to furnish a *particular* description of this species, accompanying its figure. But this supplementary notice would not have been considered necessary, if our author had not fallen into a mistake respecting the markings of the female, and the young male; the former of which he describes as *destitute of the crimson on the forehead*; and the latter *not receiving that ornament till the succeeding spring*. When Wilson procured his specimens, it was in the autumn, previously to their receiving their perfect winter dress; and he was never afterwards aware of his error, owing to the circumstance of these birds seldom appearing in the neighbourhood of Philadelphia. Considerable flocks of them, however, having visited us in the winter of 1813-14, we were enabled to procure several fine specimens of both sexes, from the most perfect of which we took the following description. We will add, that having had the good fortune to observe a flock, consisting of nearly a hundred, within a few

feet of them, as they were busily engaged in picking the seeds of some garden plants, we can with confidence assert that they *all* had the red patch on the crown; but there were very few which had the red rump and breast; the young males, it is probable, are not thus marked until the spring; and the females are destitute of that ornament altogether.

The Lesser Red-poll is five inches and a quarter in length, and eight inches and a half in breadth; the bill is pale yellow, ridged above and below with dark horn colour, the upper mandible projecting somewhat over the lower at the tip; irides dark hazel; the nostrils are covered with recumbent, hair-like feathers of drab colour; a line of brown extends from the eyes, and encircles the base of the bill, forming in some specimens a patch below the chin; the crown is ornamented with a pretty large spot of deep shining crimson; the throat, breast and rump, stained with the same, but of a more delicate red; the belly is of a very pale ash, or dull white; the sides are streaked with dusky; the whole upper parts are brown or dusky, the plumage edged with yellowish white and pale ash, the latter most predominant near the rump; wings and tail dusky, the latter is forked, and consists of twelve feathers edged with white; the primaries are very slightly tipped and edged with white; the secondaries more so; the greater and lesser coverts are also tipped with white, forming the bars across the wings; thighs cinereous; legs and feet black; hind claw considerably hooked, and longer than the rest.

The female is less bright in her plumage above; and her under parts incline more to an ash colour; the spot on her crown is of a golden crimson, or reddish saffron.

One male specimen was considerably larger than the rest; it measured five inches and three quarters in length, and nine inches and a quarter in breadth; the breast and rump were tawny; its claws were uncommonly long, the hind one measured nearly three-eighths of an inch; and the spot on the crown was of a darker hue than that of the rest.

The call of this bird exactly resembles that of the *Fringilla tristis*, or common Yellow-bird of Pennsylvania.

The Red-polls linger in the neighbourhood of Philadelphia until about the middle of April; but whither they retire for the business of incubation, we cannot determine.

In common with almost all our Finches, the Red-polls become very fat, and are then accounted delicious eating. During the winter above-mentioned, many thousands of them were exposed to sale in the Philadelphia market, and were readily purchased by those epicures, whose love of variety permits no delicacy to escape them.

In America this species must breed far to the north, perhaps beyond the residence of man, as they are so tame and unsuspicious that one can openly approach to within five or six feet of them, while they are occupied in feeding. As a proof of their rarity in Pennsylvania, I have not observed them since the early part of the year 1814; they were then so common that they swarmed in the gardens of Philadelphia.—*G. Ord.*

SPECIES 16. FRINGILLA PASSERINA.

YELLOW-WINGED SPARROW.

[Plate XXIV.—Fig. 5.]

PEALE'S *Museum*, No. 6585.

THIS small species is now for the first time introduced to the notice of the public. I can, however, say little towards illustrating its history, which, like that of many individuals of the human race, would be but a dull detail of humble obscurity. It inhabits the lower parts of New York and Pennsylvania; is very numerous on Staten island, where I first observed it; and occurs also along the sea coast of New Jersey. But though it breeds in each of these places, it does not remain in any of them during the winter. It has a short, weak, interrupted chirrup, which it occasionally utters from the fences and tops of low bushes. Its nest is fixed on the ground, among the grass; is formed of loose dry grass, and lined with hair and fibrous roots of plants. The eggs are five, of a grayish white sprinkled with brown. On the first of August I found the female sitting.

I cannot say what extent of range this species has, having never met with it in the southern states; though I have no doubt that it winters there with many others of its tribe. It is the scarcest of all our summer Sparrows. Its food consists principally of grass seeds, and the larvæ of insects, which it is almost continually in search of among the loose soil and on the surface, consequently it is more useful to the farmer than otherwise.

The length of this species is five inches, extent eight inches; upper part of the head blackish, divided by a slight line of white; hind head and neck above marked with short lateral touches of black and white; a line of yellow extends from above the eye to the nostril; cheeks plain brownish white; back streaked with

black, brown, and pale ash; shoulders of the wings above and below, and lesser coverts olive yellow; greater wing coverts black, edged with pale ash; primaries light drab; tail the same, the feathers rather pointed at the ends, the outer ones white; breast plain yellowish white, or pale ochre, which distinguishes it from the Savannah Sparrow (Plate XXII, fig. 3.); belly and vent white; three or four slight touches of dusky at the sides of the breast; legs flesh colour; bill dusky above, pale bluish white below. The male and female are nearly alike in colour.

SPECIES 17. *FRINGILLA CYANEA*.

INDIGO BIRD.

[Plate VI.—Fig. 5.]

Tanagra cyanea, LINN. *Syst.* I, 315.—*Le Ministre*, BUFFON, IV, 96.
—*Indigo Bunting*, *Arct. Zool.* II, No. 235.—LATH. *Syn.* III,
205, 63.—*Blue Linnet*, EDW. 273.—*Linaria cyanea*, BARTRAM,
p. 290.—PEALE'S *Museum*, No. 6002.

THIS is another of those rich-plumaged tribes, that visit us in spring from the regions of the south. It arrives in Pennsylvania on the second week in May; and disappears about the middle of September. It is numerous in all the settled parts of the middle and eastern states; in the Carolinas and Georgia it is also abundant. Though Catesby says that it is only found at a great distance from the sea; yet round the city of New York, and in many places along the shores of New Jersey, I have met with them in plenty. I may also add, on the authority of Mr. William Bartram, that "they inhabit the continent and sea-coast islands, from Mexico to Nova Scotia, from the sea-coast west beyond the Apalachian and Cherokee mountains."* They are also known in Mexico, where they probably winter. Its favourite haunts, while with us, are about gardens, fields of deep clover, the borders of woods, and road sides, where it is frequently seen perched on the fences. In its manners it is extremely active and neat; and a vigorous and pretty good songster. It mounts to the highest tops of a large tree, and chants for half an hour at a time. Its song is not one continued strain, but a repetition of short notes, commencing loud and rapid, and falling by almost imperceptible gradations for six or eight seconds, till they seem hardly articulate, as if the little minstrel were quite exhausted; and after a pause of half a minute or less, com-

* Travels, p. 299.

mences again as before. Some of our birds sing only in spring, and then chiefly in the morning, being comparatively mute during the heat of noon; but the Indigo bird chants with as much animation under the meridian sun, in the month of July, as in the month of May; and continues his song, occasionally, to the middle or end of August. His usual note, when alarmed by an approach to his nest, is a sharp *chip*, like that of striking two hard pebbles smartly together.

Notwithstanding the beauty of his plumage, the vivacity with which he sings, and the ease with which he can be reared and kept, the Indigo bird is seldom seen domesticated. The few I have met with were taken in trap-cages; and such of any species rarely sing equal to those which have been reared by hand from the nest. There is one singularity which, as it cannot be well represented in the figure, may be mentioned here, *viz.* that in some certain lights his plumage appears of a rich sky-blue, and in others of a vivid verdigrise green; so that the same bird, in passing from one place to another before your eyes, seems to undergo a total change of colour. When the angle of incidence of the rays of light, reflected from his plumage, is acute, the colour is green, when obtuse, blue. Such I think I have observed to be uniformly the case, without being optician enough to explain why it is so. From this, however, must be excepted the colour of the head, which being of a very deep blue, is not affected by a change of position.

The nest of this bird is usually built in a low bush, among rank grass, grain or clover; suspended by two twigs, one passing up each side; and is composed outwardly of flax, and lined with fine dry grass. I have also known it to build in the hollow of an apple tree. The eggs, generally five, are blue, with a blotch of purple at the great end.

The Indigo bird is five inches long, and seven inches in extent; the whole body is of a rich sky-blue, deepening on the head to an ultramarine, with a tinge of purple; the blue on the body, tail, and wings, varies in particular lights to a light green, or verdigrise colour, similar to that on the breast of a peacock;

wings black, edged with light blue, and becoming brownish towards the tips; lesser coverts light blue; greater black, broadly skirted with the same blue; tail black, exteriorly edged with blue; bill black above, whitish below, somewhat larger in proportion than Finches of the same size usually are, but less than those of the genus *Emberiza*, with which Penant has classed it, though I think improperly, as the bird has much more of the form and manners of the genus *Fringilla*, where I must be permitted to place it; legs and feet blackish brown. The female is of a light flaxen colour, with the wings dusky black, and the cheeks, breast, and whole lower parts a clay colour, with streaks of a darker colour under the wings, and tinged in several places with bluish. Towards fall the male while moulting becomes nearly of the colour of the female, and in one which I kept through the winter, the rich plumage did not return for more than two months; though I doubt not had the bird enjoyed his liberty and natural food under a warm sun this brownness would have been of shorter duration. The usual food of this species is insects and various kinds of seeds.

GENUS 40. MUSCICAPA. FLYCATCHER.

SPECIES 1. *M. TYRANNUS*.

TYRANT FLYCATCHER, OR KING-BIRD.

[Plate XIII.—Fig. 1.]

Lanius Tyrannus, LINN. *Syst.* 136.—LATH. *Syn.* I, 186.—CATESB. I, 55.—*Le Tyran de la Caroline*, BUFF. IV, 577. *Pl. Enl.* 676.—*Arct. Zool.* p. 384, No. 263.—PEALE'S *Museum*, No. 578.

THIS is the *Field Martin* of Maryland and some of the southern states, and the *King-bird* of Pennsylvania and several of the northern districts. The epithet *Tyrant*, which is generally applied to him by naturalists, I am not altogether so well satisfied with; some, however, may think the two terms pretty nearly synonymous.

The trivial name King as well as Tyrant has been bestowed on this bird for its extraordinary behaviour, and the authority it assumes over all others, during the time of breeding. At that season his extreme affection for his mate, and for his nest and young, makes him suspicious of every bird that happens to pass near his residence, so that he attacks without discrimination, every intruder. In the months of May, June, and part of July, his life is one continued scene of broils and battles, in which, however, he generally comes off conqueror. Hawks and Crows, the Bald Eagle, and the great Black Eagle, all equally dread a rencontre with this dauntless little champion, who, as soon as he perceives one of these last approaching, lanches into the air to meet him, mounts to a considerable height above him, and darts down on his back, sometimes fixing there to the great annoyance of his sovereign, who, if no convenient retreat or resting place be near, endeavours by various evolutions to rid him-

self of his merciless adversary. But the King-bird is not so easily dismounted.—He teases the Eagle incessantly, sweeps upon him from right and left, remounts, that he may descend on his back with the greater violence; all the while keeping up a shrill and rapid twittering; and continuing the attack sometimes for more than a mile, till he is relieved by some other of his tribe equally eager for the contest.

There is one bird, however, which by its superior rapidity of flight, is sometimes more than a match for him; and I have several times witnessed his precipitate retreat before this active antagonist. This is the *Purple Martin*, one whose food and disposition is pretty similar to his own; but who has greatly the advantage of him on wing, in eluding all his attacks, and teasing him as he pleases. I have also seen the Red-headed Woodpecker, while clinging on a rail of the fence, amuse himself with the violence of the King-bird, and play *bo-peep* with him round the rail, while the latter, highly irritated, made every attempt as he swept from side to side to strike him, but in vain. All this turbulence, however, vanishes as soon as his young are able to shift for themselves; and he is then as mild and peaceable as any other bird.

But he has a worse habit than all these; one much more obnoxious to the husbandman, and often fatal to himself. He loves, not the honey, but the *bees*; and, it must be confessed, is frequently on the look-out for these little industrious insects. He plants himself on a post of the fence, or on a small tree in the garden, not far from the hives, and thence sallies on them as they pass and repass, making great havock among their numbers. His shrill twitter, so near to the house, gives intimation to the farmer of what is going on, and the gun soon closes his career for ever. Man arrogates to himself, in this case, the exclusive privilege of murder; and after putting thousands of these same little insects to death, seizes on the fruits of their labour.

The King-birds arrive in Pennsylvania about the twentieth of April, sometimes in small bodies of five and six together, and are at first very silent, until they begin to pair, and build

their nest. This generally takes place about the first week in May. The nest is very often built in the orchard, on the horizontal branch of an apple tree; frequently also, as Catesby observes, on a sassafras tree, at no great height from the ground. The outside consists of small slender twigs, tops of withered flowers of the plant yarrow, and others, well wove together with tow and wool; and is made large, and remarkably firm and compact. It is usually lined with fine dry fibrous grass, and horse hair. The eggs are five, of a very pale cream colour, or dull white, marked with a few large spots of deep purple, and other smaller ones of light brown, chiefly, though not altogether, towards the great end (see fig. 1.). They generally build twice in the season.

The King-bird is altogether destitute of song, having only the shrill twitter above mentioned. His usual mode of flight is singular. The vibrations of his broad wings, as he moves slowly over the fields, resemble those of a Hawk hovering and settling in the air to reconnoitre the ground below; and the object of the King-bird is no doubt something similar, *viz.* to look out for passing insects, either in the air, or among the flowers and blossoms below him. In fields of pasture he often takes his stand, on the tops of the mullein, and other rank weeds, near the cattle, and makes occasional sweeps after passing insects, particularly the large black gad-fly, so terrifying to horses and cattle. His eye moves restlessly around him, traces the flight of an insect for a moment or two, then that of a second, and even a third, until he perceives one to his liking, when with a shrill sweep he pursues, seizes it, and returns to the same spot again, to look out for more. This habit is so conspicuous when he is watching the bee-hive, that several intelligent farmers of my acquaintance are of opinion that he picks out only the *drones*, and never injures the working bees. Be this as it may, he certainly gives a preference to one bee, and one species of insect, over another. He hovers over the river, sometimes for a considerable time, darting after insects that frequent such places, snatching them from the surface of the water, and diving about

in the air like a Swallow; for he possesses at will great powers of wing. Numbers of them are frequently seen thus engaged, for hours together, over the rivers Delaware and Schuylkill, in a calm day, particularly towards evening. He bathes himself by diving repeatedly into the water from the overhanging branches of some tree; where he sits to dry and dress his plumage.

Whatever antipathy may prevail against him for depredations on the drones, or if you will, on the bees, I can assure the cultivator, that this bird is greatly his friend, in destroying multitudes of insects whose larvæ prey on the harvests of his fields, particularly his corn, fruit trees, cucumbers, and pumpkins. These noxious insects are the daily food of this bird; and he destroys, upon a very moderate average, some hundreds of them daily. The death of every King-bird is therefore an actual loss to the farmer, by multiplying the numbers of destructive insects; and encouraging the depredations of Crows, Hawks, and Eagles, who avoid as much as possible his immediate vicinity. For myself, I must say, that the King-bird possesses no common share of my regard. I honour this little bird for his extreme affection for his young; for his contempt of danger, and unexampled intrepidity; for his meekness of behaviour when there are no calls on his courage, a quality which even in the human race is justly considered so noble;

“In peace there’s nothing so becomes a man

“As modest stillness and humility;

“But when the blast of war,” &c. &c.

but above all, I honour and esteem this bird for the millions of ruinous vermin which he rids us of; whose depredations, in *one* season, but for the services of this and other friendly birds, would far overbalance all the produce of the bee-hives in fifty.

As a friend to this persecuted bird, and an enemy to prejudices of every description, will the reader allow me to set this matter in a somewhat clearer and stronger light, by presenting him with a short poetical epitome of the King-bird’s history?

FAR in the south, where vast *Maragnon* flows,
 And boundless forests unknown wilds enclose;
 Vine-tangled shores, and suffocating woods,
 Parch'd up with heat, or drown'd with pouring floods;
 Where each extreme alternately prevails,
 And Nature sad their ravages bewails;
 Lo! high in air, above those trackless wastes,
 With Spring's return the King-bird hither hastes;
 Coasts the fam'd Gulf,* and from his height explores,
 Its thousand streams, its long indented shores,
 Its plains immense, wide op'ning on the day,
 Its lakes and isles where feather'd millions play;
 All tempt not him; till, gazing from on high,
 COLUMBIA's regions wide below him lie;
 There end his wand'rings and his wish to roam,
 There lie his native woods, his fields, his *home*;
 Down, circling, he descends, from azure heights,
 And on a full-blown sassafras alights.

Fatigued and silent, for a while he views
 His old frequented haunts, and shades recluse,
 Sees brothers, comrades, every hour arrive—
 Hears, humming round, the tenants of the hive;
 Love fires his breast, he woos, and soon is blest;
 And in the blooming orchard builds his nest.

Come now, ye cowards! ye whom heav'n disdains,
 Who boast the happiest home—the richest plains;
 On whom, perchance, a wife, an infant's eye
 Hang as their hope, and on your arm rely;
 Yet, when the hour of danger and dismay
 Comes on that country, sneak in holes away,
 Shrink from the perils ye were bound to face,
 And leave those babes and country to disgrace;
 Come here (if such we have), ye dastard herd!
 And kneel in dust before this noble bird.

When the speck'd eggs within his nest appear,
 Then glows affection, ardent and sincere;
 No discord sours him when his mate he meets;
 But each warm heart with mutual kindness beats.
 For her repast he bears along the lea
 The bloated gad-fly and the balmy bee;

* Of Mexico.

For her repose scours o'er th' adjacent farm,
 Whence Hawks might dart, or lurking foes alarm;
 For now abroad a band of ruffians prey,
 The Crow, the Cuckoo, and th' insidious Jay;
 These, in the owner's absence, all destroy,
 And murder every hope, and every joy.

Soft sits his brooding mate; her guardian he,
 Perch'd on the top of some tall neighb'ring tree;
 Thence, from the thicket to the concave skies,
 His watchful eye around unceasing flies.
 Wrens, Thrushes, Warblers, startled at his note,
 Fly in affright the consecrated spot.
 He drives the plund'ring *Jay*, with honest scorn,
 Back to his woods; the *Mocker* to his thorn;
 Sweeps round the *Cuckoo*, as the thief retreats;
 Attacks the *Crow*; the diving *Hawk* defeats;
 Darts on the *Eagle* downwards from afar,
 And midst the clouds prolongs the whirling war.
 All danger o'er, he hastens back elate,
 To guard his post and feed his faithful mate.

Behold him now, his little family flown,
 Meek, unassuming, silent, and alone;
 Lur'd by the well-known hum of fav'rite bees,
 As slow he hovers o'er the garden trees;
 (For all have failings, passions, whims that lead;
 Some fav'rite wish, some appetite to feed;)
 Strait he alights, and from the pear-tree spies
 The circling stream of humming insects rise;
 Selects his prey; darts on the busy brood,
 And shrilly twitters o'er his sav'ry food.

Ah! ill-timed triumph! direful note to thee,
 That guides thy murderer to the fatal tree;
 See where he skulks! and takes his gloomy stand;
 The deep-charg'd musket hanging in his hand;
 And gaunt for blood, he leans it on a rest,
 Prepar'd, and pointed at thy snow-white breast.
 Ah friend! good friend! forbear that barb'rous deed,
 Against it valour, goodness, pity plead;
 If e'er a family's griefs, a widow's wo,
 Have reach'd thy soul, in mercy let him go!
 Yet, should the tear of pity nought avail,
 Let *interest* speak, let *gratitude* prevail;

Kill not thy friend, who thy whole harvest shields,
And sweeps ten thousand vermin from thy fields;
Think how this dauntless bird, thy poultry's guard,
Drove ev'ry Hawk and Eagle from thy yard;
Watch'd round thy cattle as they fed, and slew
The hungry black'ning swarms that round them flew;
Some small return, some little right resign,
And spare *his* life whose services are thine!
——— I plead in vain! Amid the bursting roar
The poor, lost KING-BIRD, welters in his gore.

This species is eight inches long, and fourteen in extent; the general colour above is a dark slaty ash; the head and tail are nearly black; the latter *even* at the end, and tipped with white; the wings are more of a brownish cast; the quills and wing-coverts are also edged with dull white; the upper part of the breast is tinged with ash; the throat, and all the rest of the lower parts are pure white; the plumage on the crown, though not forming a crest, is frequently erected, as represented in the plate, and discovers a rich bed of brilliant orange, or flame colour, called by the country people his crown; when the feathers lie close this is altogether concealed. The bill is very broad at the base, overhanging at the point, and notched, of a glossy black colour, and furnished with bristles at the base; the legs and feet are black, seamed with gray; the eye hazel. The female differs in being more brownish on the upper parts, has a smaller streak of paler orange on the crown; and a narrower border of duller white on the tail. The young birds do not receive the orange on the head during their residence here the first season.

This bird is very generally known, from the lakes to Florida. Besides insects, they feed, like every other species of their tribe with which I am acquainted, on various sorts of berries, particularly blackberries, of which they are extremely fond. Early in September they leave Pennsylvania on their way to the south.

A few days ago, I shot one of these birds, the whole plumage of which was nearly white, or a little inclining to a cream colour; it was a bird of the present year, and could not be more

than a month old. This appeared also to have been its original colour, as it issued from the egg. The skin was yellowish white; the eye much lighter than usual; the legs and bill blue. It was plump and seemingly in good order. I presented it to Mr. Peale. Whatever may be the cause of this loss of colour, if I may so call it, in birds, it is by no means uncommon among the various tribes that inhabit the United States. The Sparrow Hawk, Sparrow, Robin, Red-winged Blackbird, and many others, are occasionally found in white plumage; and I believe that such birds do not become so by climate, age or disease, but that they are universally hatched so. The same phenomena are observable not only among various sorts of animals, but even among the human race; and a white negro is no less common, in proportion to their numbers, than a white Blackbird; though the precise cause of this in either is but little understood.

SPECIES 2. MUSCICAPA CRINITA.

GREAT CRESTED FLYCATCHER.

[Plate XIII.—Fig. 2.]

LINN. *Syst.* 325.—LATH. II, 357.—*Arct. Zool.* p. 386, No. 267.—
Le mouche-rolle de Virginie a huppe verte, BUFF. IV, 565. *Pl.*
Enl. 569.—PEALE'S *Museum*, No. 6645.

By glancing at the physiognomy of this bird and the rest of the figures on the same plate, it will readily be observed, that they all belong to one particular family of the same genus. They possess strong traits of their particular *cast*, and are all remarkably dexterous at their profession of fly-catching. The one now before us is less generally known than the preceding, being chiefly confined to the woods. There his harsh *squeak*, for he has no song, is occasionally heard above most others. He also visits the orchard; is equally fond of bees; but wants the courage and magnanimity of the King-bird. He arrives in Pennsylvania early in May, and builds his nest in a hollow tree deserted by the Blue-bird or Wood-pecker. The materials of which this is formed are scanty, and rather novel. One of these nests, now before me, is formed of a little loose hay, feathers of the Guinea fowl, hog's bristles, pieces of cast snake skins, and dogs' hair. Snake skins with this bird appear to be an indispensable article, for I have never yet found one of his nests without this material forming a part of it. Whether he surrounds his nest with this by way of *terrorem*, to prevent other birds or animals from entering; or whether it be that he finds its silky softness suitable for his young, is uncertain; the fact however is notorious. The female lays four eggs of a dull cream colour thickly scratched with purple lines of various tints as if done with a pen. See fig. 2.

This species is eight inches and a half long, and thirteen inches in extent; the upper parts are of a dull greenish olive; the feathers on the head are pointed, centered with dark brown, ragged at the sides, and form a kind of blowzy crest; the throat and upper parts of the breast delicate ash; rest of the lower parts a sulphur yellow; the wing coverts are pale drab, crossed with two bars of dull white; the primaries are of a bright ferruginous or sorrel colour; the tail is slightly forked, its interior vanes of the same bright ferruginous as the primaries; the bill is blackish, very much like that of the King-bird, furnished also with bristles; the eye is hazel; legs and feet bluish black. The female can scarcely be distinguished, by its colours, from the male.

This bird also feeds on berries towards the end of summer, particularly on huckle-berries, which, during the time they last, seem to form the chief sustenance of the young birds. I have observed this species here as late as the tenth of September; rarely later. They do not, to my knowledge, winter in any of the southern states.

SPECIES 3. *MUSCICAPA NUNCIOLA*.*

PEWIT FLYCATCHER.

[Plate XIII.—Fig. 4.]

BARTRAM, p. 289.—*Black-cap Flycatcher*, LATH. *Syn.* II, 353.—*Phæbe Flycatcher*, *Ibid.* *Sup.* p. 173.—*Le gobe-mouche noirâtre de la Caroline*, BUFF. IV, 541.—*Arct. Zool.* p. 387, No. 269.—PEALE'S *Museum*, No. 6618.

THIS well-known bird is one of our earliest spring visitants, arriving in Pennsylvania about the first week in March, and continuing with us until October. I have seen them here as late as the twelfth of November. In the month of February I overtook these birds lingering in the low swampy woods of North and South Carolina. They were feeding on smilax berries and chanting occasionally their simple notes. The favourite resort of this bird is by streams of water, under, or near bridges, in caves, &c. Near such places he sits on a projecting twig, calling out *pe-wee, pe-wit-titee pe-wee*, for a whole morning; darting after insects, and returning to the same twig; frequently flirting his tail, like the wagtail, though not so rapidly. He begins to build about the twentieth or twenty-fifth of March, on some projecting part under a bridge—in a cave—in an open well five or six feet down among the interstices of the side walls—often under a shed—in the low eaves of a cottage, and such like places. The outside is composed of mud mixed with moss; is generally large and solid; and lined with flax and horse hair. The eggs are five, pure white, with two or three dots of red near the great end. See fig. 4. I have known them rear three broods in one season.

In a particular part of Mr. Bartram's woods, with which I am acquainted, by the side of a small stream, in a cave, five or six

* *Muscicapa fusca*, GMEL. I, p. 931.—Lath. *Ind. Orn.* II, p. 483.

feet high, formed by the undermining of the water below, and the projection of two large rocks above:

There down smooth glist'ning rocks the rivulet pours,
Till in a pool its silent waters sleep,
A dark brow'd cliff, o'ertopp'd with fern and flowr's,
Hangs, grimly louting, o'er the glassy deep;
Above through every chink the woodbines creep,
And smooth-bark'd beeches spread their arms around,
Whose roots cling twisted round the rocky steep;
A more sequester'd scene is no where found,
For contemplation deep, and silent thought profound.

In this cave I knew the Pewit to build for several years. The place was solitary, and he was seldom disturbed. In the month of April, one fatal Saturday, a party of boys from the city, armed with guns, dealing indiscriminate destruction among the feathered tribes around them, directed their murderous course this way, and within my hearing destroyed both parents of this old and peaceful settlement. For two successive years, and I believe to this day there has been no Pewee seen about this place. This circumstance almost convinces me that birds, in many instances, return to the same spots to breed; and who knows but like the savage nations of Indians they may usurp a kind of exclusive right of tenure to particular districts where they themselves have been reared.

The notes of the Pewee, like those of the Blue-bird, are pleasing, not for any melody they contain, but from the ideas of spring and returning verdure with all the sweets of this lovely season, which are associated with his simple but lively ditty. Towards the middle of June he becomes nearly silent; and late in the Fall gives us a few farewell and melancholy repetitions, that recal past imagery, and make the decayed and withered face of nature appear still more melancholy.

The Pewit is six inches and a half in length, and nine and a half broad; the upper parts are of a dark dusky olive; the plumage of the head, like those of the two preceding, is loose, suberested, and of a deep brownish black; wings and tail deep

dusky, the former edged on every feather with yellowish white, the latter forked, and widening remarkably towards the end; bill formed exactly like that of the King-bird; whole lower parts a pale delicate yellow; legs and bill wholly black; iris hazel. The female is almost exactly like the male, except in having the crest somewhat more brown. This species inhabits from Canada to Florida; great numbers of them usually wintering in the two Carolinas and Georgia. In New York they are called the Phœby-bird, and are accused of destroying bees. With many people in the country, the arrival of the Pewee serves as a sort of almanack, reminding them that now it is time such and such work should be done. "Whenever the Pewit appears," says Mr. Bartram, "we may plant peas and beans in the open grounds, French beans, sow radishes, onions, and almost every kind of esculent garden seeds, without fear or danger from frosts; for although we have sometimes frosts after their first appearance for a night or two, yet not so severe as to injure the young plants."*

* Travels, page 288.

SPECIES 4. *MUSCICAPA RAPAX*.*

WOOD PEWEE FLYCATCHER.

[Plate XIII.—Fig. 5.]

Muscicapa virens, LINN. *Syst.* 327.—LATH. *Syn.* II, 350.—*Id.* *Supp.* p. 174, No. 82.—CATESB. I, 54, fig. 1.—*Le gobe-mouche brun de la Caroline*, BUFF. IV, 543.—*Muscicapa acadica*, GMEL. *Syst.* I, p. 947.—*Arct. Zool.* 387, No. 270.—PEALE'S *Museum*, No. 6660.

I HAVE given the name Wood Pewee to this species, to discriminate it from the preceding, which it resembles so much in form and plumage as scarcely to be distinguished from it, but by an accurate examination of both. Yet in manners, mode of building, period of migration and notes, the two species differ greatly. The Pewee is among the first birds that visit us in spring, frequenting creeks, building in caves and under arches of bridges; the *Wood Pewee*, the subject of our present account, is among the latest of our summer birds, seldom arriving before the twelfth or fifteenth of May; frequenting the shadiest high timbered woods, where there is little underwood, and abundance of dead twigs and branches shooting across the gloom, generally in low situations; builds its nest on the upper side of a limb or branch, forming it outwardly of moss; but using no mud; and lining it with various soft materials. The female lays five white eggs; and the first brood leave the nest about the middle of June.

This species is an exceeding expert Flycatcher. It loves to sit on the high dead branches, amid the gloom of the woods, calling out in a feeble plaintive tone, *peto way; peto way; pee way*; occasionally darting after insects; sometimes making a

* *Muscicapa virens*, LINN. which name should be adopted.

circular sweep of thirty or forty yards, snapping up numbers in its way with great adroitness; and returning to its position and chant as before. In the latter part of August its notes are almost the only ones to be heard in the woods; about which time, also, it even approaches the city, where I have frequently observed it busily engaged under trees, in solitary courts, gardens, &c. feeding and training its young to their profession. About the middle of September it retires to the south a full month before the other.

Length six inches, breadth ten; back dusky olive, inclining to greenish; head subcrested and brownish black; tail forked and widening towards the tips, lower parts pale yellowish white: the only discriminating marks between this and the preceding are the size, and the colour of the lower mandible, which in this is yellow—in the Pewee black. The female is difficult to be distinguished from the male.

This species is far more numerous than the preceding; and probably winters much farther south. The Pewee was numerous in North and South Carolina, in February; but the Wood Pewee had not made its appearance in the lower parts of Georgia even so late as the sixteenth of March.

*SPECIES 5. MUSCICAPA QUERULA.**

SMALL GREEN, CRESTED FLYCATCHER.

[Plate XIII.—Fig. 3.]

Muscicapa subviridis, BARTRAM, p. 289.—*Arct. Zool.* p. 386, No. 268.—PEALF's *Museum*, No. 6825.

THIS bird is but little known. It inhabits the deepest, thick shaded, solitary parts of the woods, sits generally on the lower branches, utters every half minute or so, a sudden sharp squeak, which is heard a considerable way through the woods; and as it flies from one tree to another has a low querulous note, something like the twitterings of chickens nestling under the wings of the hen. On alighting this sound ceases; and it utters its note as before. It arrives from the south about the middle of May; builds on the upper side of a limb, in a low swampy part of the woods, and lays five white eggs. It leaves us about the beginning of September. It is a rare and very solitary bird, always haunting the most gloomy, moist and unfrequented parts of the forest. It feeds on flying insects; devours bees; and in the season of huckle-berries they form the chief part of its food. Its northern migrations extend as far as Newfoundland.

The length of this species is five inches and a half, in breadth nine inches; the upper parts are of a green olive colour; the lower pale greenish yellow, darkest on the breast; the wings are deep brown, crossed with two bars of yellowish white, and a ring of the same surrounds the eye, which is hazel. The tail is *rounded* at the end; the bill is remarkably flat and broad, dark brown above, and flesh colour below; legs and feet pale ash. The female differs little from the male in colour.

* *Muscicapa acadica*, GMEL. I, p. 947.—LATH. *Ind. Orn.* II, p. 489.

SPECIES 6. *MUSCICAPA RUTICILLA*.

AMERICAN REDSTART.

[Plate VI.—Fig. 6. Male.]

Muscicapa Ruticilla, LINN. *Syst.* I, 236, 10.—GMEL. *Syst.* I, 935.

—*Motacilla flavicauda*, GMEL. *Syst.* I, 997. (female).—*Le Gobe-mouche d'Amerique*, BRISS. *Orn.* II, 383, 14. *Pl. Enl.* 566, fig. 1, 2.—*Small American Redstart*, EDW. 80. *Id.* 257. (female).

—*Yellow-tailed Warbler*, ARCT. *Zool.* II, No. 301. *Id.* II, No. 282.—LATHAM, *Syn.* IV, 427, 18.—ARCT. *Zool.* II, No. 301, (female).—PEALE'S *Museum*, No. 6658.

THOUGH this bird has been classed by several of our most respectable ornithologists among the Warblers, yet in no species are the characteristics of the genus *Muscicapa* more decisively marked; and in fact it is one of the most expert Flycatchers of its tribe. It is almost perpetually in motion; and will pursue a retreating party of flies from the tops of the tallest trees, in an almost perpendicular, but zig-zag direction, to the ground, while the clicking of its bill is distinctly heard, and I doubt not but it often secures ten or twelve of these in a descent of three or four seconds. It then alights on an adjoining branch, traverses it lengthwise for a few moments, flirting its expanded tail from side to side, and suddenly shoots off, in a direction quite unexpected, after fresh game, which it can discover at a great distance. Its notes, or twitter, though animated and sprightly, are not deserving the name of song; sometimes they are *weese, weese, weese*, repeated every quarter of a minute, as it skips among the branches; at other times this twitter varies to several other chants, which I can instantly distinguish in the woods, but cannot find words to imitate. The interior of the forest, the borders of swamps and meadows, deep glens covered

with wood, and wherever flying insects abound, there this little bird is sure to be seen. It makes its appearance in Pennsylvania, from the south, late in April; and leaves us again about the beginning of September. It is very generally found over the whole United States; and has been taken at sea, in the fall, on its way to St. Domingo,* and other of the West India islands, where it winters, along with many more of our summer visitors. It is also found in Jamaica, where it remains all winter.†

The name Redstart, evidently derived from the German *Rothstarts* (red tail), has been given this bird from its supposed resemblance to the Redstart of Europe (*Motacilla phoenicurus*); but besides being decisively of a different genus, it is very different both in size and in the tints and disposition of the colours of its plumage. Buffon goes even so far as to question whether the differences between the two be more than what might be naturally expected from change of climate. This eternal reference of every animal of the new world to that of the old, if adopted to the extent of this writer, with all the transmutations it is supposed to have produced, would leave us in doubt whether even the *Ka-te-dids*|| of America were not originally Nightingales of the old world, degenerated by the inferiority of the food and climate of this upstart continent. We have in America many different species of birds that approach so near in resemblance to one another, as not to be distinguished but by the eye of a naturalist, and on a close comparison; these live in the same climate, feed on the same food, and are, I doubt not, the same now as they were five thousand years ago; and ten thousand years hence, if the species then exist, will be found marked with the same nice discriminations as at present. Is it therefore surprising, that two different species placed in different quarters of the world, should have certain near resemblances to one another without being bastards, or degenerated descendants, the one of

* Edwards.

† Sloane.

|| A species of *Gryllus*, well known for its lively chatter during the evenings and nights of September and October.

the other, when the whole chain of created beings seem united to each other by such amazing gradations, that bespeak, not random chance and accidental degeneracy, but the magnificent design of an incomprehensibly wise and omnipotent Creator?

The American Redstart builds frequently in low bushes, in the fork of a small sapling, or on the drooping branches of the elm, within a few feet of the ground; outwardly it is formed of flax well wound together, and moistened with its saliva, interspersed here and there with pieces of lichen, and lined with a very soft downy substance. The female lays five white eggs, sprinkled with gray, and specks of blackish. The male is extremely anxious for its preservation; and on a person's approaching the place will flirt about within a few feet, seeming greatly distressed.

The length of this species is five inches, extent six and a quarter; the general colour above is black, which covers the whole head and neck, and spreads on the upper part of the breast in a rounding from; where, as well as on the head and neck, it is glossed with steel blue; sides of the breast, below this black, the inside of the wings, and upper half of the wing-quills, are of a fine aurora colour; but the greater and lesser coverts of the wings being black conceal this; and the orange, or aurora colour, appears only as a broad transverse band across the wings; from thence to the tip they are brownish; the four middle feathers of the tail are black, the other eight of the same aurora colour, and black towards the tips; belly and vent white, slightly streaked with pale orange; legs black; bill of the true *Muscicapa* form, triangular at the base, beset with long bristles, and notched near the point; the female has not the rich aurora band across the wing; her back and crown is cinereous inclining to olive; the white below is not so pure; lateral feathers of the tail and sides of the breast greenish yellow; middle tail feathers dusky brown. The young males of a year old are almost exactly like the female, differing in these particulars, that they have a yellow band across the wings which the female has not, and the back is more tinged with brown; the lateral tail feathers are also yel-

low; middle ones brownish black; inside of the wings yellow. On the third season they receive their complete colours; and as males of the second year, in nearly the dress of the female, are often seen in the woods, having the same notes as the full plumaged male, it has given occasion to some people to assert, that the females sing as well as the males; and others have taken them for another species. The fact, however, is as I have stated it. This bird is too little known by people in general to have any provincial name.

MUSCICAPA RUTICILLA.

REDSTART.

[Plate XLV.—Fig. 2. Young Bird.]

THE male of this species may be seen in his perfect dress, in plate 6; the present figure represents the young bird as he appears for the first two seasons; the female differs very little from this, chiefly in the green olive; being more inclined to ash.

This is one of our summer birds, and from the circumstance of being found off Hispaniola in November, is supposed to winter in the islands. They leave Pennsylvania about the twentieth of September; are dexterous flycatchers, though ranked by European naturalists among the warblers, having the bill notched and beset with long bristles.

In its present dress the Redstart makes its appearance in Pennsylvania about the middle or twentieth of April; and from being heard chanting its few sprightly notes has been supposed by some of our own naturalists to be a different species. I have, however, found both parents of the same nest in the same dress nearly; the female, eggs and nest, as well as the notes of the male, agreeing exactly with those of the Redstart; evidence sufficiently satisfactory to me.

Head above dull slate; throat pale buff; sides of the breast and four exterior tail feathers fine yellow, tip with dark brown; wings and back greenish olive; tail coverts blackish, tip with ash; belly dull white; no white or yellow on the wings; legs dirty purplish brown; bill black.

The Redstart extends very generally over the United States; having myself seen it on the borders of Canada, and also in the Mississippi territory.

This species has the constant habit of flirting its expanded tail from side to side as it runs along the branches, with its head levelled almost in a line with its body; occasionally shooting off after winged insects, in a downward zig-zag direction, and with admirable dexterity, snapping its bill as it descends. Its notes are few and feeble, repeated at short intervals as it darts among the foliage; having at some times a resemblance to the sounds *sic sic saic*; at others of *weesy weesy weesy*; which last seems to be its call for the female, while the former appears to be its most common note.

SPECIES 7. MUSCICAPA CÆRULEA.

BLUE-GRAY FLYCATCHER.

[Plate XVIII.—Fig. 5.]

Motacilla cærulea, TURTON, *Syst.* I, p. 612.—*Blue Flycatcher*, EWD. *Pl.* 302.—*Regulus griseus*, the little Bluish Gray Wren, BARTRAM, p. 291.—*Le figuier gris de fer*, BUFF. V, p. 309.—*Cærulean Warbler*, ARCT. Zool. II, No. 299.—LATH. *Syn.* IV, p. 490, No. 127.—PEALE'S *Museum*, No. 6829.

THIS diminutive species, but for the length of the tail, would rank next to our Humming-bird in magnitude. It is a very dexterous Flycatcher, and has also something of the manners of the Titmouse, with whom, in early spring and fall, it frequently associates. It arrives in Pennsylvania from the south about the middle of April; and about the beginning of May builds its nest, which it generally fixes among the twigs of a tree, sometimes at the height of ten feet from the ground, sometimes fifty feet high, on the extremities of the tops of a high tree in the woods. This nest is formed of very slight and perishable materials, the husks of buds, stems of old leaves, withered blossoms of weeds, down from the stalks of fern, coated on the outside with gray lichen, and lined with a few horse hairs. Yet in this frail receptacle, which one would think scarcely sufficient to admit the body of the owner, and sustain even its weight, does the female Cow-bird venture to deposit her egg; and to the management of these pigmy nurses leaves the fate of her helpless young. The motions of this little bird are quick; he seems always on the look out for insects; darts about from one part of the tree to another with hanging wings and erected tail, making a feeble chirping, *tsee, tsee*, no louder than a mouse. Though so small in itself, it is ambitious of hunting on the high-

est branches, and is seldom seen among the humbler thickets. It remains with us until the twentieth or twenty-eighth of September, after which we see no more of it until the succeeding spring. I observed this bird near Savannah, in Georgia, early in March; but it does not winter even in the southern parts of that state.

The length of this species is four inches and a half, extent six and a half; front and line over the eye black; bill black, very slender, overhanging at the tip, notched, broad, and furnished with bristles at the base; the colour of the plumage above is a light bluish gray, bluest on the head, below bluish white; tail longer than the body, a little rounded and black, except the exterior feathers, which are almost all white, and the next two also tipped with white; tail coverts black; wings brownish black, some of the secondaries next the body edged with white; legs extremely slender, about three-fourths of an inch long, and of a bluish black colour. The female is distinguished by wanting the black line round the front.

The food of this bird is small winged insects and their larvæ, but particularly the former, which it seems almost always in pursuit of.

SPECIES S. *MUSCICAPA SYLVICOLA*.*

YELLOW-THROATED FLYCATCHER.

[Plate VII.—Fig. 3.]

PEALE'S *Museum*, No. 6827.

THIS summer species is found chiefly in the woods, hunting among the high branches; and has an indolent and plaintive note, which it repeats, with some little variation, every ten or twelve seconds, like *preeo—preea*, &c. It is often heard in company with the Red-eyed Flycatcher (*Muscicapa olivacea*), or Whip-Tom-Kelly of Jamaica; the loud energetic notes of the latter, mingling with the soft languid warble of the former, producing an agreeable effect, particularly during the burning heat of noon, when almost every other songster but these two is silent. Those who loiter through the shades of our magnificent forests at that hour, will easily recognize both species. It arrives from the south early in May, and returns again with its young about the middle of September. Its nest, which is sometimes fixed on the upper side of a limb, sometimes on a horizontal branch among the twigs, generally on a tree, is composed outwardly of thin strips of the bark of grape-vines, moss, lichens, &c., and lined with fine fibres of such like substances; the eggs, usually four, are white, thinly dotted with black, chiefly near the great end. Winged insects are its principal food.

Whether this species has been described before or not I must leave to the sagacity of the reader, who has the opportunity of examining European works of this kind, to discover.† I have met with no description in Pennant, Buffon, or Latham, that will properly apply to this bird, which may perhaps be owing

* *Vireo flavifrons*, Ois. de l'Am. Sept. VIEILLOT, pl. 54.

† See "Orange-throated Warbler." LATH. *Syn.* II, 481, 103.

to the imperfection of the account, rather than ignorance of the species, which is by no means rare.

The Yellow-throated Flycatcher is five inches and a half long, and nine inches from tip to tip of the expanded wings; the upper part of the head, sides of the neck, and the back, are of a fine yellow olive; throat, breast and line over the eye, which it nearly encircles, a delicate lemon yellow, which in a lighter tinge lines the wings; belly and vent pure silky white; lesser wing coverts, lower part of the back, and rump, ash; wings deep brown, almost black, crossed with two white bars; primaries edged with light ash, secondaries with white; tail a little forked, of the same brownish black with the wings, the three exterior feathers edged on each vane with white; legs and claws light blue; the two exterior toes united to the middle one as far as the second joint; bill broad at the base, with three or four slight bristles, the upper mandible overhanging the lower at the point, near which it is deeply notched; tongue thin, broad, tapering near the end, and bifid; the eye is of a dark hazel; and the whole bill of a dusky light blue. The female differs very little in colour from the male; the yellow on the breast and round the eye is duller, and the white on the wings less pure.

SPECIES 9. MUSCICAPA SOLITARIA.

SOLITARY FLYCATCHER.

[Plate XVII.—Fig. 6. Male.]

THIS rare species I can find no where described. I have myself never seen more than three of them; all of whom corresponded in their markings; and on dissection were found to be males. It is a silent, solitary bird. It is also occasionally found in the state of Georgia, where I saw a drawing of it in the possession of Mr. Abbot, who considered it a very scarce species. He could give me no information of the female. The one from which the figure in the plate was taken, was shot in Mr. Bartram's woods, near Philadelphia, among the branches of dogwood, in the month of October. It appears to belong to a particular family, or subdivision of the *Muscicapa* genus, among which are the White-eyed, the Yellow-throated, and several others already described in the present work. Why one species should be so rare, while another, much resembling it, is so numerous, at least a thousand for one, is a question I am unable to answer; unless by supposing the few we meet with here to be accidental stragglers from the great body, which may have their residence in some other parts of our extensive continent.

The Solitary Flycatcher is five inches long, and eight inches in breadth; cheeks and upper part of the head and neck, a fine bluish gray; breast pale cinereous; flanks and sides of the breast yellow; whole back and tail coverts green olive; wings nearly black; the first and second row of coverts tipped with white; the three secondaries next the body edged with pale yellowish white; the rest of the quills bordered with light green; tail slightly forked, of the same tint as the wings, and edged with

light green; from the nostrils a line of white proceeds to and encircles the eye; lores black; belly and vent white; upper mandible black; lower light blue; legs and feet light blue; eyes hazel.

SPECIES 10. *MUSCICAPA CANTATRIX*.

WHITE-EYED FLYCATCHER.

[Plate XVIII.—Fig. 6.]

Muscicapa noveboracensis, GMEL. *Syst.* I, p. 947.—*Hanging Flycatcher*, LATH. *Syn. Supp.* p. 174.—*Arct. Zool.* p. 389, No. 274.—*Muscicapa cantatrix*, the little Domestic Flycatcher, or Green Wren, BARTRAM, p. 290.—PEALE'S *Museum*, No. 6778.*

THIS is another of the Cow-bird's adopted nurses; a lively, active, and sociable little bird, possessing a strong voice for its size, and a great variety of notes; and singing with little intermission, from its first arrival about the middle of April to a little before its departure in September. On the twenty-seventh of February I heard this bird in the southern parts of the state of Georgia, in considerable numbers, singing with great vivacity. They had only arrived a few days before. Its arrival in Pennsylvania, after an interval of seven weeks, is a proof that our birds of passage, particularly the smaller species, do not migrate at once from south to north; but progress daily, keeping company, as it were, with the advances of spring. It has been observed in the neighbourhood of Savannah, so late as the middle of November; and probably winters in Mexico, and the West Indies.

This bird builds a very neat little nest, often in the figure of an inverted cone; it is suspended by the upper edge of the two sides, on the circular bend of a prickly vine, a species of *Smilax* that generally grows in low thickets. Outwardly it is constructed of various light materials, bits of rotten wood, fibres of dry stalks, of weeds, pieces of paper, commonly newspapers, an article almost always found about its nest, so that some of my friends have given it the name of the *Politician*; all these sub-

* *Vireo musicus*, VIEILLLOT, *Ois. de l'Am.* Sept. pl. 52.

stances are interwoven with the silk of caterpillars, and the inside is lined with fine dry grass and hair. The female lays five eggs, pure white, marked near the great end with a very few small dots of deep black or purple. They generally raise two brood in a season. They seem particularly attached to thickets of this species of Smilax, and make a great ado when any one comes near their nest; approaching within a few feet, looking down, and scolding with great vehemence. In Pennsylvania they are a numerous species.

The White-eyed Flycatcher is five inches and a quarter long, and seven in extent; the upper parts are a fine yellow olive, those below white, except the sides of the breast, and under the wings, which are yellow; line round the eye, and spot near the nostril also rich yellow; wings deep dusky black, edged with olive green, and crossed with two bars of pale yellow; tail forked, brownish black, edged with green olive; bill, legs and feet light blue; the sides of the neck incline to a grayish ash. The female, and young of the first season, are scarcely distinguishable in plumage from the male.

*SPECIES 11. MUSCICAPA MELODIA.**

WARBLING FLYCATCHER.

[Plate XLII.—Fig. 2.]

THIS sweet little warbler is for the first time figured and described. In its general appearance it resembles the Red-eyed Flycatcher; but on a close comparison differs from that bird in many particulars. It arrives in Pennsylvania about the middle of April, and inhabits the thick foliage of orchards and high trees; its voice is soft, tender and soothing, and its notes flow in an easy continued strain that is extremely pleasing. It is often heard among the weeping willows and Lombardy poplars of the city; is rarely observed in the woods; but seems particularly attached to the society of man. It gleams among the leaves, occasionally darting after winged insects, and searching for caterpillars; and seems by its manners to partake considerably of the nature of the genus *Sylvia*. It is late in departing, and I have frequently heard its notes among the fading leaves of the poplar in October.

This little bird may be distinguished from all the rest of our songsters by the soft tender easy flow of its notes, while hid among the foliage. In these there is nothing harsh, sudden or emphatical; they glide along in a kind of meandering strain that is peculiarly its own. In May and June it may be generally heard in the orchards, the borders of the city, and around the farm house.

This species is five inches and a half long, and eight inches and a half in extent; bill dull lead colour above, and notched near the point, lower a pale flesh colour; eye dark hazel; line over the eye and whole lower parts white, the latter tinged with

* *Muscicapa gilva*, VIEILLOT, Ois. de L'Am. Sept. pl. 34.

very pale greenish yellow near the breast; upper parts a pale green olive; wings brown, broadly edged with pale olive green; tail slightly forked, edged with olive; the legs and feet pale lead; the head inclines a little to ash; no white on the wings or tail. Male and female nearly alike.

SPECIES 12. MUSCICAPA OLIVACEA.

RED-EYED FLYCATCHER.

[Plate XII.—Fig. 2.]

LINN. *Syst.* I, p. 327, 14.—*Gobe-mouche de la Caroline et de la Jamaïque*, BUFF. IV, p. 539. EDW. t. 253.—CATESB. t. 54.—LATH. *Syn.* III, p. 351, No. 52.—*Muscicapa sylvicola*, BARTRAM, p. 290.—PEALE'S *Museum*, No. 6675.*

THIS is a numerous species, though confined chiefly to the woods and forests, and, like all the rest of its tribe that visit Pennsylvania, is a bird of passage. It arrives here late in April; has a loud, lively and energetic song, which it continues, as it hunts among the thick foliage, sometimes for an hour with little intermission. In the months of May, June, and to the middle of July, it is the most distinguishable of all the other warblers of the forest; and even in August, long after the rest have almost all become mute, the notes of the Red-eyed Flycatcher are frequently heard with unabated spirit. These notes are in short, emphatical bars, of two, three, or four syllables. In Jamaica, where this bird winters, and is probably also resident, it is called, as Sloan informs us, "Whip-Tom Kelly," from an imagined resemblance of its notes to these words. And indeed, on attentively listening for sometime to this bird in his full ardour of song, it requires but little of imagination to fancy that you hear it pronounce these words, "Tom Kelly! Whip-Tom Kelly!" very distinctly. It inhabits from Georgia to the river St. Lawrence, leaving Pennsylvania about the middle of September.

This bird builds in the month of May a small neat pensile nest, generally suspended between two twigs of a young dog-

* *Muscicapa alticola*, VIEILL. *Ois. de l'Am. Sept.* pl. 38.

wood or other small sapling. It is hung by the two upper edges, seldom at a greater height than four or five feet from the ground. It is formed of pieces of hornets' nests, some flax, fragments of withered leaves, slips of vine bark, bits of paper, all glued together with the saliva of the bird, and the silk of caterpillars, so as to be very compact; the inside is lined with fine slips of grape vine bark, fibrous grass, and sometimes hair. These nests are so durable that I have often known them to resist the action of the weather for a year; and in one instance I found the nest of the Yellow-bird built in the cavity of one of these of the preceding year. The mice very often take possession of them after they are abandoned by the owners. The eggs are four, sometimes five, pure white, except near the great end, where they are marked with a few small dots of dark brown or reddish. They generally raise two broods in a season.

The Red-eyed Flycatcher is one of the adopted nurses of the Cow-bird, and a very favourite one, showing all the symptoms of affection for the foundling, and as much solicitude for its safety, as if it were its own. The figure of that singular bird, accompanied by a particular account of its history, is given in Plate XVIII of the present work.

Before I take leave of this bird, it may not be amiss to observe that there is another, and a rather less species of Flycatcher, somewhat resembling the Red-eyed, which is frequently found in its company. Its eyes are hazel, its back more cinereous than the other, and it has a single light streak over the eye. The notes of this bird are low, somewhat plaintive, but warbled out with great sweetness; and form a striking contrast with those of the Red-eyed Flycatcher. I think it probable that Dr. Barton had reference to this bird when he made the following remarks. See his "Fragments of the Natural History of Pennsylvania," page 19. "*Muscicapa olivacea*.—I do not think with Mr. Pennant that this is the same bird as the Whip-Tom-Kelly of the West Indies. Our bird has no such note; but a great variety of soft, tender and agreeable notes. It inhabits forests; and does not, like the West India bird, build a pendulous nest."

Had the learned Professor, however, examined into this matter with his usual accuracy, he would have found, that the *Muscicapa olivacea*, and the soft and tender songster he mentions, are two very distinct species; and that both the one and the other actually build very curious pendulous nests.

This species is five inches and a half long, and seven inches in extent; crown ash, slightly tinged with olive, bordered on each side with a line of black, below which is a line of white passing from the nostril over and a little beyond the eye; the bill is longer than usual with birds of its tribe, the upper mandible overhanging the lower considerably and notched, dusky above, and light blue below; all the rest of the plumage above is of a yellow olive, relieved on the tail and at the tips of the wings with brown; chin, throat, breast and belly pure white; inside of the wings and vent feathers greenish yellow; the tail is very slightly forked; legs and feet light blue; iris of the eye red. The female is marked nearly in the same manner, and is distinguishable only by the greater obscurity of the colours.

SPECIES 13. *MUSCICAPA CUCULLATA.*

HOODED FLYCATCHER.

[Plate XXVI.—Fig. 3.]

Le gobe-mouche citrin, BUFFON, IV, 538. *Pl. Enl.* 666.—*Hooded Warbler*, *Arct. Zool.* p. 400, No. 287.—LATHAM, II, 462.—CATESBY, I, 60.—*Mitred Warbler*, TURTON, I, 601.—*Hooded Warbler*, *Ibid.*—PEALE'S *Museum*, No. 7062.*

WHY those two judicious naturalists, Pennant and Latham, should have arranged this bird with the Warblers is to me unaccountable; as few of the *Muscicapæ* are more distinctly marked than the species now before us. The bill is broad at the base, where it is beset with bristles; the upper mandible notched, and slightly overhanging at the tip; and the manners of the bird, in every respect, those of a Flycatcher. This species is seldom seen in Pennsylvania and the northern states; but through the whole extent of country south of Maryland, from the Atlantic to the Mississippi, is very abundant. It is however most partial to low situations, where there is plenty of thick underwood; abounds among the canes in the state of Tennessee, and in the Mississippi territory; and seems perpetually in pursuit of winged insects; now and then uttering three loud not unmusical and very lively notes, resembling *twée, twée, twitchie*, while engaged in the chase. Like almost all its tribe it is full of spirit, and exceedingly active. It builds a very neat and compact nest, generally in the fork of a small bush, forms it outwardly of moss and flax, or broken hemp, and lines it with hair, and sometimes feathers; the eggs are five, of a grayish white, with red spots

* We add the following synonymes:—*Motacilla mitrata*, GMEL. I, p. 977.—*Sylvia mitrata*, LATH. *Ind. Orn.* II, p. 528.—VIEILL. *Ois. de l'Am. Sept.* pl. 77.—*Sylvia cucullata*, LATH. *Ind. Orn.* II, p. 528.

towards the great end. In all parts of the United States, where it inhabits, it is a bird of passage. At Savannah I met with it about the twentieth of March; so that it probably retires to the West India islands, and perhaps Mexico, during winter. I also heard this bird among the rank reeds and rushes within a few miles of the mouth of the Mississippi. It has been sometimes seen in the neighbourhood of Philadelphia; but rarely; and on such occasions has all the mute timidity of a stranger, at a distance from home.

This species is five inches and a half long, and eight in extent; forehead, cheeks and chin yellow, surrounded with a hood of black that covers the crown, hind head, and part of the neck, and descends, rounding, over the breast; all the rest of the lower parts are rich yellow; upper parts of the wings, the tail and back, yellow olive; interior vares and tips of the wing and tail dusky; bill black; legs flesh coloured; inner webs of the three exterior tail feathers white for half their length from the tips; the next slightly touched with white; the tail slightly forked, and exteriorly edged with rich yellow olive.

The female has the throat and breast yellow, slightly tinged with blackish; the black does not reach so far down the upper part of the neck, and is not of so deep a tint. In the other parts of her plumage she exactly resembles the male. I have found some females that had little or no black on the head or neck above; but these I took to be young birds, not yet arrived at their full tints.

*SPECIES 14. MUSCICAPA CANADENSIS.**

CANADA FLYCATCHER.

[Plate XXVI.—Fig. 2. Male.]

LINN. *Syst.* 324.—*Arct. Zool.* p. 338, No. 273.—LATHAM, II, 354.
—PEALE'S *Museum*, No. 6969.

THIS is a solitary, and in the lower parts of Pennsylvania, rather a rare species; being more numerous in the interior, particularly near the mountains, where the only two I ever met with were shot. They are silent birds, as far as I could observe; and were busily darting among the branches after insects. From the specific name given them it is probable that they are more plenty in Canada than in the United States; where it is doubtful whether they be not mere passengers in spring and autumn.

This species is four inches and a half long, and eight in extent; front black; crown dappled with small streaks of gray and spots of black; line from the nostril to and around the eye yellow; below the eye a streak or spot of black, descending along the sides of the throat, which, as well as the breast and belly, is brilliant yellow, the breast being marked with a broad rounding band of black, composed of large irregular streaks; back, wings and tail cinereous brown; vent white; upper mandible dusky, lower flesh coloured; legs and feet the same; eye hazel.

Never having met with the female of this bird I am unable at present to say in what its colours differ from those of the male.

* *Sylvia pardalina*, BONAPARTE, *Obs.* No. 126.—*Ibid.* SYNOP. No. 108.

*SPECIES 15. MUSCICAPA PUSILLA.**

GREEN BLACK-CAPT FLYCATCHER.

[Plate XXVI.—Fig. 4. Male.]

PEALE'S *Museum*, No. 7785.

THIS neat and active little species I have never met with in the works of any European naturalist. It is an inhabitant of the swamps of the southern states, and has been several times seen in the lower parts of the states of New Jersey and Delaware. Amidst almost unapproachable thickets of deep morasses it commonly spends its time, during summer, and has a sharp squeaking note, nowise musical. It leaves the southern states early in October.

This species is four inches and a half long, and six and a half in extent; front line over the eye and whole lower parts yellow, brightest over the eye and dullest on the cheeks, belly and vent, where it is tinged with olive; upper parts olive green; wings and tail dusky brown, the former very short; legs and bill flesh coloured; crown covered with a patch of deep black; iris of the eye hazel.

The female is without the black crown, having that part of a dull yellow olive, and is frequently mistaken for a distinct species. From her great resemblance, however, in other respects to the male, now first figured, she cannot hereafter be mistaken.

* *Sylvia Wilsonii*, BONAPARTE, *Obs.* No. 126.—*Ibid.* SYNOP. 135.

SPECIES 16. MUSCICAPA MINUTA.

SMALL-HEADED FLYCATCHER.

[Plate L.—Fig. 5. Male.]

THIS very rare species is the only one I have met with, and is drawn reduced to half its size, to correspond with the rest of the figures on the same plate. It was shot on the twenty-fourth of April, in an orchard, and was remarkably active, running, climbing and darting about among the opening buds and blossoms with extraordinary agility. From what quarter of the United States or of North America it is a wanderer, I am unable to determine, having never before met with an individual of the species. Its notes and manner of breeding are also alike unknown to me. This was a male: it measured five inches long, and eight and a quarter in extent; the upper parts were dull yellow olive; the wings dusky brown edged with lighter; the greater and lesser coverts tipped with white; the lower parts dirty white, stained with dull yellow, particularly on the upper parts of the breast; the tail dusky brown, the two exterior feathers marked like those of many others with a spot of white on the inner vanes; head remarkably small; bill broad at the base, furnished with bristles, and notched near the tip; legs dark brown; feet yellowish; eye dark hazel.

Since writing the above I have shot several individuals of this species in various quarters of New Jersey, particularly in swamps. They all appear to be nearly alike in plumage. Having found them there in June, there is no doubt of their breeding in that state, and probably in such situations far to the southward; for many of the southern summer birds that rarely visit Pennsylvania, are yet common to the swamps and pine woods of New Jersey. Similarity of soil and situation, of plants

and trees, and consequently of fruits, seeds, insects, &c. are doubtless their inducements. The summer Red-bird, Great Carolina Wren, Pine-creeping Warbler, and many others, are rarely seen in Pennsylvania, or to the northward, though they are common in many parts of West Jersey.

GENUS 41. ALAUDA. LARK.

SPECIES 1. *A. MAGNA*.*

MEADOW LARK.

[Plate XIX.—Fig. 2.]

LINN. *Syst.* 289.—*Crescent Stare*, *Arct. Zool.* 330. *No.* 192.—LATHAM, III, 6. *Var. A.*—*Le Fer-a-cheval, ou Merle a Collier d'Amerique*, BUFF. III, p. 371.—CATESB. *Car.* I, pl. 33.—BARTRAM, p. 290.—PEALE'S *Museum*, *No.* 5212.

THOUGH this well-known species cannot boast of the powers of song which distinguish that “harbinger of day,” the Sky Lark of Europe, yet in richness of plumage, as well as in sweetness of voice (as far as his few notes extend), he stands eminently its superior. He differs from the greater part of his tribe in wanting the long straight hind claw, which is probably the reason why he has been classed, by some late naturalists, with the Starlings. But in the particular form of his bill, in his manners, plumage, mode and place of building his nest, nature has clearly pointed out his proper family.

This species has a very extensive range; having myself found them in Upper Canada, and in each of the states from New Hampshire to New Orleans. Mr. Bartram also informs me that they are equally abundant in East Florida. Their favourite places of retreat are pasture fields and meadows, particularly the latter, which have conferred on them their specific name; and no

* *Alda magna*, LINN. *Syst.* I, p. 167. Ed. 10.—GMEL. *Syst.* I, p. 801.—*Merula Americana torquata*, BRISS. *Av.* II, p. 242. *No.* 15.—(Summer dress.) *Sturnus ludovicianus*, LINN. *Syst.* I, p. 290.—GMEL. *Syst.* I, p. 802.—BRISSON, II, p. 449. 4. l. 42. f. 1.—LATH. *Ind. Orn.* I, 323.—*Etourneau de la Louisiane*. BUFF. III, p. 192.—*Pl. Enl.* 256.—(winter plumage.)

doubt supplies them abundantly with the particular seeds and insects on which they feed. They are rarely or never seen in the depth of the woods; unless where, instead of underwood, the ground is covered with rich grass, as in the Chactaw and Chickasaw countries, where I met with them in considerable numbers in the months of May and June. The extensive and luxuriant prairies between Vincennes and St. Louis also abound with them.

It is probable that in the more rigorous regions of the north they may be birds of passage, as they are partially so here; though I have seen them among the meadows of New Jersey, and those that border the rivers Delaware and Schuylkill, in all seasons; even when the ground was deeply covered with snow. There is scarcely a market day in Philadelphia, from September to March, but they may be found in market. They are generally considered, for size and delicacy, little inferior to the quail, or what is here usually called the partridge, and valued accordingly. I once met with a few of these birds in the month of February, during a deep snow, among the heights of the Alleghany between Shippensburgh and Somerset, gleaning on the road, in company with the small snow-birds. In the state of South Carolina and Georgia, at the same season of the year, they swarm among the rice plantations, running about the yards and out-houses, accompanied by the Kildeers, with little appearance of fear, as if quite domesticated.

These birds, after the building season is over, collect in flocks; but seldom fly in a close compact body; their flight is something in the manner of the grouse and partridge, laborious and steady; sailing, and renewing the rapid action of the wings alternately. When they alight on trees or bushes, it is generally on the tops of the highest branches, whence they send forth a long, clear, and somewhat melancholy note, that in sweetness and tenderness of expression is not surpassed by any of our numerous warblers. This is sometimes followed by a kind of low, rapid chattering, the particular call of the female; and again the clear and plaintive strain is repeated as before. They afford tolerable good

amusement to the sportsman, being most easily shot while on wing; as they frequently squat among the long grass, and spring within gunshot. The nest of this species is built generally in, or below, a thick tuft or tussock of grass; it is composed of dry grass, and fine bent laid at bottom, and wound all around, leaving an arched entrance level with the ground; the inside is lined with fine stalks of the same materials, disposed with great regularity. The eggs are four, sometimes five, white, marked with specks and several large blotches of reddish brown, chiefly at the thick end. Their food consists of caterpillars, grub worms, beetles, and grass seeds; with a considerable proportion of gravel. Their general name is the *Meadow Lark*; among the Virginians they are usually called the *Old field Lark*.

The length of this bird is ten inches and a half, extent sixteen and a half; throat, breast, belly, and line from the eye to the nostrils, rich yellow; inside lining and edge of the wing the same; an oblong crescent of deep velvety black ornaments the lower part of the throat; lesser wing-coverts black, broadly bordered with pale ash; rest of the wing feathers light brown, handsomely serrated with black; a line of yellowish white divides the crown, bounded on each side by a stripe of black intermixed with bay, and another line of yellowish white passes over each eye backwards; cheeks bluish white, back and rest of the upper parts beautifully variegated with black, bright bay, and pale ochre: tail wedged, the feathers neatly pointed, the four outer ones on each side, nearly all white; sides, thighs, and vent pale yellow ochre, streaked with black; upper mandible brown, lower bluish white; eyelids furnished with strong black hairs; legs and feet very large, and of a pale flesh colour.

The female has the black crescent more skirted with gray, and not of so deep a black. In the rest of her markings the plumage differs little from that of the male. I must here take notice of a mistake committed by Mr. Edwards in his *History of Birds*, Vol. VI, p. 123, where, on the authority of a bird dealer of London, he describes the Calandre Lark (a native of Italy and Russia) as belonging also to N. America, and having been

brought from Carolina. I can say with confidence, that in all my excursions through that and the rest of the southern states, I never met such a bird, nor any person who had ever seen it. I have no hesitation in believing that the Calandre is not a native of the United States.

SPECIES 2. *ALAUDA ALPESTRIS*.*

SHORE LARK.

[Plate V.—Fig. 4.]

Alauda alpestris, LINN. *Syst.* 289.—LATH. *Syn.* II, 385.—*Alauda campestris gutture flavo*, BARTRAM, p. 290.—*L'Alouette de Virginie*, BUFF. V, 55.—CATESB. I, 52.—PEALE'S *Museum*, No. 5190.†

THIS is the most beautiful of its genus, at least in this part of the world. It is one of our winter birds of passage, arriving from the north in the fall; usually staying with us the whole winter, frequenting sandy plains and open downs, and is numerous in the southern states, as far as Georgia, during that season. They fly high, in loose scattered flocks; and at these times have a single cry, almost exactly like the Sky-Lark of Britain. They are very numerous in many tracts of New Jersey; and are frequently brought to Philadelphia market. They are then generally very fat, and are considered excellent eating. Their food seems principally to consist of small round compressed black seeds, buckwheat, oats, &c. with a large proportion of gravel. On the flat commons, within the boundaries of the city of Philadelphia, flocks of them are regularly seen during the whole winter. In the stomach of these I have found, in numerous instances, quantities of the eggs or larvæ of certain insects, mixed with a kind of slimy earth. About the middle of March they generally disappear, on their route to the north. Forster

* Of the three species referred by Wilson to *Alauda* this is the only one which belongs to that genus, as restricted by modern ornithologists.

† We add the following synonyms:—*Alauda alpestris*, LINN. *Ed.* 10. *Syst.* I, p. 166.—GMEL. *Syst.* I, p. 800.—LATH. *Ind. Orn.* II, p. 498.—*Alauda flava*, GMEL. *Syst.* I, p. 800, (adult male in breeding dress).—*Alauda Virginiana*, BRISS. III, p. 367, 12.—*Alouette de Sibirie*, BUFF. *Pl. Enl.* 650, fig. 2.

informs us, that they visit the environs of Albany fort, in the beginning of May; but go farther north to breed; that they feed on grass seeds, and buds of the sprig birch, and run into small holes, keeping close to the ground; from whence the natives call them *chi-chup-pi-sue*.* This same species appears also to be found in Poland, Russia, and Siberia in winter, from whence they also retire farther north on the approach of spring; except in the north-east parts, and near the high mountains.†

The length of this bird is seven inches, the extent twelve inches; the forehead, throat, sides of the neck, and line over the eye is of a delicate straw or Naples yellow, elegantly relieved by a bar of black, that passes from the nostril to the eye, below which it falls, rounding, to the depth of three-quarters of an inch; the yellow on the forehead and over the eye is bounded, within, for its whole length, with black, which covers part of the crown; the breast is ornamented with a broad fan-shaped patch of black; this as well as all the other spots of black are marked with minute curves of yellow points; back of the neck, and towards the shoulders a light drab tinged with lake; lesser wing coverts bright cinnamon; greater wing coverts the same, interiorly dusky, and tipped with whitish; back and wings drab-coloured, tinged with reddish, each feather of the former having a streak of dusky black down its centre; primaries deep dusky, tipped and edged with whitish; exterior feathers most so; secondaries broadly edged with light drab, and scalloped at the tips; tail forked, black; the two middle feathers, which by some have been mistaken for the coverts, are reddish drab, centred with brownish black; the two outer ones on each side exteriorly edged with white; breast of a dusky vinous tinge, and marked with spots or streaks of the same; the belly and vent white; sides streaked with bay; bill short (Latham, in mistake, says seven inches‡), of a dusky blue colour; tongue truncate and bifid; legs and claws black; hind heel very long and almost

* Phil. Trans. vol. LXII, p. 398.

† Arct. Zool.

‡ Syn. vol. II, p. 385.

straight; iris of the eye hazel. One glance at the figure on the plate will give a better idea than the whole of this minute description, which, however, has been rendered necessary by the errors of others. The female has little or no black on the crown; and the yellow on the front is narrow, and of a dirty tinge.

There is a singular appearance in this bird which I have never seen taken notice of by former writers, *viz.* certain long black feathers, which extend, by equal distances beyond each other, above the eye-brow; these are longer, more pointed, and of a different texture from the rest around them; and the bird possesses the power of erecting them so as to appear as if horned, like some of the Owl tribe. Having kept one of these birds alive for some time I was much amused at this odd appearance; and think it might furnish a very suitable specific appellation, *viz.* *Alauda cornuta*, or Horned Lark. These horns become scarcely perceivable after the bird is dead. The head is slightly crested.

Shore Lark and Sky Lark are names by which this species is usually known in different parts of the union. They are said to sing well; mounting in the air, in the manner of the Song Lark of Europe; but this is only in those countries where they breed. I have never heard of their nests being found within the territory of the United States.

SPECIES 3. *ALAUDA RUF A*.*

BROWN LARK.

[Plate XLII.—Fig. 4.]

Red Lark, EDW. 297.—*Arct. Zool. No.* 279.—LATHAM, II, 376.
—*L'Alouette aux joues brunes de Pensylvanie*, BUFF. v, 58.—
PEALE'S *Museum*, No. 5138.

IN what particular district of the northern regions this bird breeds, I am unable to say. In Pennsylvania it first arrives from the north about the middle of October; flies in loose scattered flocks; is strongly attached to flat, newly-ploughed fields, commons, and such like situations; has a feeble note characteristic of its tribe; runs rapidly along the ground; and when the flock takes to wing they fly high, and generally to a considerable distance before they alight. Many of them continue in the neigh-

* This bird is common to Europe and America, and as many nominal species have been made of it we quote the following synonyms from Prince Musignano's observations in the Journal of the Academy of Natural Sciences of Philadelphia vol. iv, p. 182—3.

Synonymes of the American specimens:—*Alauda rubra*, GMEL. LATH.—*Alauda ludoviciana*, GMEL. LATH.—*Alauda pensylvanica*, BRISS.—*Farlouzanne*, BUFF. Ois.—*Alouette aux joues brunes de Pensylvanie*, BUFF. Ois.—*Lark from Pennsylvania*, EDW. Glean. pl. 297.—*Red Lark*, PENN. Brit. and Arct. Zool. LATH. Syn.—*Louisiana Lark*, LATH. Syn.

Synonymes of the European specimens:—*Anthus aquaticus*, BECHST. MEYER. VIEILL. nouv. dict. TEMM.—*Alauda spinoletta*, LINN. (Ought not this specific name to be restored?)—*Alauda campestris* β . *spinoletta*, GMEL. LATH.—*Alauda obscura*, GMEL. LATH. (young).—*Alauda petrosa*, MONTAGU, Trans. Linn. Soc. Lond. (young).—*Anthus rupestris*, NILSSON, Orn. Suec.—*Alouette pipi*. (by error) BUFF. Pl. Enl. 661. f. 2.—*Meadow Lark* var. A. LATH. Syn.—*Dusky Lark*, LATH. Syn. (young).—*Anthus montanus*, KOCH. Bayerische Zool.—The latter nominal species, as Temminck observes, was formed of an adult male, as it appears during the few days of breeding, when they have a roscate tint on the neck, breast, upper part of the belly and flanks.

bourhood of Philadelphia all winter, if the season be moderate. In the southern states, particularly in the lower parts of North and South Carolina, I found these Larks in great abundance in the middle of February. Loose flocks of many hundreds were driving about from one corn field to another; and in the low rice grounds they were in great abundance. On opening numbers of these, they appeared to have been feeding on various small seeds with a large quantity of gravel. On the eighth of April I shot several of these birds in the neighbourhood of Lexington, Kentucky. In Pennsylvania they generally disappear, on their way to the north, about the beginning of May, or earlier. At Portland, in the District of Maine, I met with a flock of these birds in October. I do not know that they breed within the United States. Of their song, nest, eggs, &c. we have no account.

The Brown Lark is six inches long, and ten inches and a half in extent; the upper parts brown olive touched with dusky; greater coverts and next superior row lighter; bill black, slender; nostril prominent; chin and line over the eye pale rufous; breast and belly brownish ochre, the former spotted with black; tertials black, the secondaries brown, edged with lighter; tail slightly forked, black; the two exterior feathers marked largely with white; legs dark purplish brown; hind heel long, and nearly straight; eye dark hazel. Male and female nearly alike. Mr. Pennant says that one of these birds was shot near London.

GENUS 43. SYLVIA. WARBLER.

SPECIES 1. *S. SIALIS*.

BLUE-BIRD.

[Plate III.—Fig. 3.]

Le Rouge gorge bleu, BUFFON, v, 212, *Pl. Enl.* 390.—*Blue-Warbler*, LATH. II, 446.—CATESB. I, 47.—*Motacilla sialis*, LINN. *Syst.* 336.—BARTRAM, p. 291.—PEALE'S *Museum*, No. 7188.*

THE pleasing manners and sociable disposition of this little bird entitle him to particular notice. As one of the first messengers of spring, bringing the charming tidings to our very doors, he bears his own recommendation always along with him, and meets with a hearty welcome from every body.

Though generally accounted a bird of passage, yet so early as the middle of February, if the weather be open, he usually makes his appearance about his old haunts, the barn, orchard and fenceposts. Storms and deep snows sometimes succeeding, he disappears for a time; but about the middle of March is again seen, accompanied by his mate, visiting the box in the garden, or the hole in the old apple-tree, the cradle of some generations of his ancestors. "When he first begins his amours," says a curious and correct observer, "it is pleasing to behold his courtship, his solicitude to please and to secure the favour of his beloved female. "He uses the tenderest expressions, sits close by her, caresses "and sings to her his most endearing warblings. When seated "together, if he espies an insect delicious to her taste, he takes

* *Motacilla sialis*, LINN. *Syst.* I, p. 187, Ed. 10.—GMEL. *Syst.* I, p. 989.—*Sylvia sialis*, LATH. *Ind. Orn.* II, 522.—VIEILLLOT, *Ois. de l'Am. Sept. pl.* 101, male; 102, female; 103, young.—*La Gorge rouge de la Caroline*, BUFF. *Pl. Enl.* 396, fig. 1, male; fig. 2, female.

“it up, flies with it to her, spreads his wing over her and puts “it in her mouth.”* If a rival makes his appearance, (for they are ardent in their loves), he quits her in a moment, attacks and pursues the intruder, as he shifts from place to place, in tones that bespeak the jealousy of his affection, conducts him with many reproofs beyond the extremities of his territory, and returns to warble out his transports of triumph beside his beloved mate. The preliminaries being thus settled, and the spot fixed on, they begin to clean out the old nest, and the rubbish of the former year, and to prepare for the reception of their future offspring. Soon after this another sociable little pilgrim (*Motacilla domestica*, House Wren), also arrives from the south, and finding such a snug birth pre-occupied, shows his spite, by watching a convenient opportunity, and in the absence of the owner popping in and pulling out sticks; but takes special care to make off as fast as possible.

The female lays five, and sometimes six, eggs, of a pale blue colour; and raises two, and sometimes three broods in a season; the male taking the youngest under his particular care while the female is again sitting. Their principal food are insects, particularly large beetles, and others of the coleopterous kinds that lurk among old dead and decaying trees. Spiders are also a favourite repast with them. In fall they occasionally regale themselves on the berries of the sour gum; and as winter approaches, on those of the red cedar, and on the fruit of a rough hairy vine that runs up and cleaves fast to the trunks of trees. Ripe persimmons is another of their favourite dishes; and many other fruits and seeds which I have found in their stomachs at that season, which, being no botanist, I am unable to particularize. They are frequently pestered with a species of tape-worm, some of which I have taken from their intestines of an extraordinary size, and in some cases in great numbers. Most other birds are also plagued with these vermin; but the Blue-bird seems more subject to them than any I know, except the Woodcock. An account of the different species of vermin, many of which I doubt

* Letter from Mr. William Bartram to the author.

not are non-descripts, that infest the plumage and intestines of our birds, would of itself form an interesting publication; but as this belongs more properly to the entomologist, I shall only, in the course of this work, take notice of some of the most remarkable; and occasionally represent them in the same plate with those birds on which they are usually found.

The usual spring and summer song of the Blue-bird is a soft, agreeable and oft-repeated warble, uttered with open quivering wings, and is extremely pleasing. In his motions and general character he has great resemblance to the Robin Red-breast of Britain; and had he the brown olive of that bird, instead of his own blue, could scarcely be distinguished from him. Like him he is known to almost every child; and shows as much confidence in man by associating with him in summer, as the other by his familiarity in winter. He is also of a mild and peaceful disposition, seldom fighting or quarrelling with other birds. His society is courted by the inhabitants of the country, and few farmers neglect to provide for him, in some suitable place, a snug little summer house, ready fitted and rent-free. For this he more than sufficiently repays them by the cheerfulness of his song, and the multitude of injurious insects which he daily destroys. Towards fall, that is in the month of October, his song changes to a single plaintive note, as he passes over the yellow, many coloured woods; and its melancholy air recalls to our minds the approaching decay of the face of nature. Even after the trees are stript of their leaves, he still lingers over his native fields, as if loth to leave them. About the middle or end of November few or none of them are seen; but with every return of mild and open weather we hear his plaintive note amidst the fields, or in the air, seeming to deplore the devastations of winter. Indeed he appears scarcely ever totally to forsake us; but to follow fair weather through all its journeyings till the return of spring.

Such are the mild and pleasing manners of the Blue-bird, and so universally is he esteemed, that I have often regretted that no pastoral muse has yet arisen in this western woody world, to

do justice to his name, and endear him to us still more by the tenderness of verse, as has been done to his representative in Britain, the Robin Red-breast. A small acknowledgment of this kind I have to offer, which the reader I hope will excuse as a tribute to rural innocence.

When winter's cold tempests and snows are no more,
Green meadows and brown furrow'd fields re-appearing,
The fishermen hauling their shad to the shore,
And cloud-cleaving geese to the Lakes are a-steering;
When first the lone butterfly flits on the wing;
When red glow the maples, so fresh and so pleasing,
O then comes the Blue-bird, the HERALD OF SPRING!
And hails with his warblings the charms of the season.

Then loud piping frogs make the marshes to ring;
Then warm glows the sunshine, and fine is the weather;
The blue woodland flowers just beginning to spring,
And, spicewood and sassafras budding together:
O then to your gardens ye housewives repair?
Your walks border up; sow and plant at your leisure;
The Blue-bird will chant from his box such an air,
That all your hard toils will seem truly a pleasure.

He flits through the orchard, he visits each tree,
The red flowering peach and the apple's sweet blossoms;
He snaps up *destroyers* wherever they be,
And seizes the caitiffs that lurk in their bosoms;
He drags the vile *grub* from the corn he devours;
The worms from their webs where they riot and welter;
His song and his services freely are ours,
And all that he asks is, in summer a shelter.

The ploughman is pleased when he gleans in his train,
Now searching the furrows—now mounting to cheer him;
The gardener delights in his sweet simple strain,
And leans on his spade to survey and to hear him;
The slow ling'ring schoolboys forget they'll be chid,
While gazing intent as he warbles before 'em
In mantle of sky-blue, and bosom so red,
That each little loiterer seems to adore him.

When all the gay scenes of the summer are o'er,
 And autumn slow enters so silent and fallow,
 And millions of warblers, that charmed us before,
 Have fled in the train of the sun-seeking swallow;
 The Blue-bird, forsaken, yet true to his home,
 Still lingers, and looks for a milder to-morrow,
 Till forced by the horrors of winter to roam,
 He sings his adieu in a lone note of sorrow.

While spring's lovely season, serene, dewy, warm,
 The green face of earth, and the pure blue of heav'n,
 Or love's native music have influence to charm,
 Or sympathy's glow to our feelings are giv'n,
 Still dear to each bosom the Blue-bird shall be;
 His voice, like the thrillings of hope, is a treasure;
 For, through bleakest storms if a calm he but see,
 He comes to remind us of sunshine and pleasure!

The Blue-bird, in summer and fall, is fond of frequenting open pasture fields; and there perching on the stalks of the great *mullein*, to look out for passing insects. A whole family of them are often seen, thus situated, as if receiving lessons of dexterity from their more expert parents, who can espy a beetle crawling among the grass, at a considerable distance; and after feeding on it, instantly resume their former position. But whoever informed Dr. Latham that "this bird is never seen on trees, though it makes its nest in the holes of them!"* might as well have said, that the Americans are never seen in the streets, though they build their houses by the sides of them. For what is there in the construction of the feet and claws of this bird to prevent it from perching? Or what sight more common to an inhabitant of this country than the Blue-bird perched on the top of a peach or apple-tree; or among the branches of those reverend broadarmed chestnut trees, that stand alone in the middle of our fields, bleached by the rains and blasts of ages?

The blue-bird is six inches and three quarters in length, the wings remarkably full and broad; the whole upper parts are of a rich sky blue, with purple reflections; the bill and legs are

* Synopsis, v. II, p. 446—40.

black; inside of the mouth and soles of the feet yellow, resembling the colour of a ripe persimmon; the shafts of all the wing and tail feathers are black; throat, neck, breast, and sides partially under the wings, chestnut; wings dusky black at the tips; belly and vent white; sometimes the secondaries are exteriorly light brown, but the bird has in that case not arrived at his full colour. The female is easily distinguished by the duller cast of the back, the plumage of which is skirted with light brown, and by the red on the breast being much fainter, and not descending near so low as in the male; the secondaries are also more dusky. This species is found over the whole United States; in the Bahama islands where many of them winter; as also in Mexico, Brazil, and Guiana.

Mr. Edwards mentions that the specimen of this bird which he was favoured with, was sent from the Bermudas; and as these islands abound with the cedar, it is highly probable that many of those birds pass from our continent thence, at the commencement of winter, to enjoy the mildness of that climate as well as their favourite food.

As the Blue-bird is so regularly seen in winter, after the continuance of a few days of mild and open weather, it has given rise to various conjectures as to the place of his retreat. Some supposing it to be in close sheltered thickets, lying to the sun; others the neighbourhood of the sea, where the air is supposed to be more temperate, and where the matters thrown up by the waves furnish him with a constant and plentiful supply of food. Others trace him to the dark recesses of hollow trees, and subterraneous caverns, where they suppose he dozes away the winter, making, like Robinson Crusoe, occasional reconnoitering excursions from his castle, whenever the weather happens to be favourable. But amidst the snows and severities of winter I have sought for him in vain in the most favourable sheltered situations of the middle states; and not only in the neighbourhood of the sea, but on both sides of the mountains.* I have

* I speak of the species here *generally*. Solitary individuals are found, particularly among our cedar trees, sometimes in the very depth of winter.

never, indeed, explored the depths of caverns in search of him, because I would as soon expect to meet with tulips and butterflies there, as Blue-birds, but among hundreds of woodmen, who have cut down trees of all sorts, and at all seasons, I have never heard one instance of these birds being found so immured in winter; while in the whole of the middle and eastern states, the same general observation seems to prevail that the Blue-bird always makes his appearance in winter after a few days of mild and open weather. On the other hand, I have myself found them numerous in the woods of North and South Carolina, in the depth of winter, and I have also been assured by different gentlemen of respectability, who have resided in the islands of Jamaica, Cuba, and the Bahamas and Bermudas, that this very bird is common there in winter. We also find, from the works of Hernandez Piso and others, that it is well known in Mexico, Guiana and Brazil; and if so, the place of its winter retreat is easily ascertained, without having recourse to all the trumpery of holes and caverns, torpidity, hybernation, and such ridiculous improbabilities.

Nothing is more common in Pennsylvania than to see large flocks of these birds in spring and fall, passing, at considerable heights in the air; from the south in the former, and from the north in the latter season. I have seen, in the month of October, about an hour after sun-rise, ten or fifteen of them descend from a great height and settle on the top of a tall detached tree, appearing, from their silence and sedateness, to be strangers, and fatigued. After a pause of a few minutes they began to dress and arrange their plumage, and continued so employed for ten or fifteen minutes more; then, on a few warning notes being given, perhaps by the leader of the party, the whole remounted to a vast height, steering in a direct line for the southwest. In passing along the chain of the Bahamas towards the West Indies, no great difficulty can occur from the frequency of these islands; nor even to the Bermudas, which are said to be 600 miles from the nearest part of the continent. This may seem an extraordinary flight for so small a bird; but it is never-

theless a fact that it is performed. If we suppose the Blue-bird in this case to fly only at the rate of a mile per minute, which is less than I have actually ascertained him to do over land, ten or eleven hours would be sufficient to accomplish the journey; besides the chances he would have of resting places by the way, from the number of vessels that generally navigate those seas. In like manner two days at most, allowing for numerous stages for rest, would conduct him from the remotest regions of Mexico to any part of the Atlantic states. When the natural history of that part of the continent and its adjacent isles, are better known, and the periods at which its birds of passage arrive and depart, are truly ascertained, I have no doubt but these suppositions will be fully corroborated.

SPECIES 2. SYLVIA CALENDULA.

RUBY-CROWNED WREN.

[Plate V.—Fig. 3.]

Le Roitelet Rubis, BUFF. V, 373.—EDW. 254.—LATH. *Syn.* II, 511.—*Arct. Zool.* 320.—*Regulus cristatus alter vertice rubini coloris*, BARTRAM, p. 292.—PEALE'S *Museum*, No. 7244.*

THIS little bird visits us early in the spring from the south, and is generally first found among the maple blossoms, about the beginning of April. These failing, it has recourse to those of the peach, apple and other fruit trees, partly for the tops of the sweet and slender stamina of the flowers, and partly for the winged insects that hover among them. In the middle of summer I have rarely met with these birds in Pennsylvania; and as they penetrate as far north as the country round Hudson's Bay, and also breed there, it accounts for their late arrival here in fall. They then associate with the different species of Titmouse, and the Golden-crested Wren; and are particularly numerous in the month of October and beginning of November in orchards, among the decaying leaves of the apple-trees, that at that season are infested with great numbers of small, black, winged insects, among which they make great havock. I have often regretted the painful necessity one is under of taking away the lives of such inoffensive useful little creatures, merely to obtain a more perfect knowledge of the species; for they appear so busy, so active and unsuspecting, as to continue searching about the same twig, even after their companions have been shot down beside them. They are more remarkably so in autumn; which

* The following synonymes may be added:—*Motacilla calendula*, LINN. I, p. 337.—GMEL. *Syst.* I, p. 994.—*Sylvia calendula*, LATH. *Ind. Orn.* II, p. 549.—*Regulus rubineus*, VIEILLIOT, *Ois. de l'Am. Sept.* pl. 104, male; 105, young given as female.

may be owing to the great number of young and inexperienced birds which are then among them; and frequently at this season I have stood under the tree, motionless, to observe them, while they gleaned among the low branches, sometimes within a foot or two of my head. They are extremely adroit in catching their prey; have only at times a feeble chirp; visit the tops of the tallest trees as well as the lowest bushes; and continue generally for a considerable time among the branches of the same tree, darting about from place to place; appearing, when on the top of a high maple, no bigger than humble-bees.

The Ruby-crowned Wren is four inches long, and six in extent; the upper parts of the head, neck and back are of a fine greenish olive, with a considerable tinge of yellow; wings and tail dusky purplish brown, exteriorly edged with yellow olive; secondaries and first row of wing-coverts edged and tipped with white, with a spot of deep purplish brown across the secondaries, just below their coverts; the hind head is ornamented with an oblong lateral spot of vermilion, usually almost hid by the other plumage; round the eye a ring of yellowish white; whole under parts of the same tint; legs dark brown; feet and claws yellow; bill slender, straight, not notched, furnished with a few black hairs at the base; inside of the mouth orange. The female differs every little in its plumage from the male, the colours being less lively, and the bird somewhat less. Notwithstanding my utmost endeavours, I have never been able to discover their nest; though, from the circumstance of having found them sometimes here in summer, I am persuaded that they occasionally breed in Pennsylvania; but I know several birds, no larger than this, that usually build on the extremities of the tallest trees in the woods; which I have discovered from their beginning before the leaves are out; many others, no doubt, choose similar situations; and should they delay building until the woods are thickened with leaves, it is no easy matter to discover them. In Fall they are so extremely fat as almost to dissolve between the fingers as you open them; owing to the great abundance of their favourite insects at that time.

SPECIES 3. SYLVIA MARILANDICA.

MARYLAND YELLOW-THROAT.

[Plate VI.—Fig. 1.—*Male.*]

Turdus Trichas, LINN. *Syst.* I, 293.—EDW. 237.—*Yellow-breasted Warbler*, *Arct. Zool.* II, No. 283. *Id.* 284.—*Le Figuier aux joues noires*, BUFF. V, 292.—*La Fauvette a poitrine jaune de la Louisiane*, BUFF. V, 162. *Pl. Enl.* 709, fig. 2.—LATH. *Syn.* IV, 433, 32.—PEALE'S *Museum*, No. 6902.

THIS is one of the humble inhabitants of briars, brambles, alder bushes, and such shrubbery as grow most luxuriantly in low watery situations, and might with propriety be denominated *Humility*, its business or ambition seldom leading it higher than the tops of the underwood. Insects and their larvæ are its usual food. It dives into the deepest of the thicket, rambles among the roots, searches round the stems, examines both sides of the leaf, raising itself on its legs so as to peep into every crevice; amusing itself at times with a very simple, and not disagreeable, song or twitter, *whitititee, whitititee, whitititee*; pausing for half a minute or so, and then repeating its notes as before. It inhabits the whole United States from Maine to Florida, and also Louisiana; and is particularly numerous in the low swampy thickets of Maryland, Pennsylvania and New Jersey. It is by no means shy; but seems deliberate and unsuspicious, as if the places it frequented, or its own diminutiveness, were its sufficient security. It often visits the fields of growing rye, wheat, barley, &c. and no doubt performs the part of a friend to the farmer, in ridding the stalks of vermin, that might otherwise lay waste his fields. It seldom approaches the farmhouse, or city; but lives in obscurity and peace amidst his favourite thickets. It arrives in Pennsylvania about the middle,

or last week, of April, and begins to build its nest about the middle of May: this is fixed on the ground, among the dried leaves, in the very depth of a thicket of briars, sometimes arched over, and a small hole left for entrance; the materials are dry leaves and fine grass, lined with coarse hair; the eggs are five, white, or semi-transparent, marked with specks of reddish brown. The young leave the nest about the twenty-second of June; and a second brood is often raised in the same season. Early in September they leave us, returning to the south.

This pretty little species is four inches and three quarters long, and six inches and a quarter in extent; back, wings, and tail, green olive, which also covers the upper part of the neck, but approaches to cinereous on the crown; the eyes are inserted in a band of black, which passes from the front, on both sides, reaching half way down the neck; this is bounded above by another band of white deepening into light blue; throat, breast, and vent brilliant yellow; belly a fainter tinge of the same colour; inside coverts of the wings also yellow; tips and inner vanes of the wings dusky brown; tail cuneiform, dusky, edged with olive-green; bill black, straight, slender, of the true *Motacilla* form; though the bird itself was considered as a species of Thrush by Linnæus, but very properly removed to the genus *Motacilla* by Gmelin; legs flesh coloured; iris of the eye dark hazel. The female wants the black band through the eye, has the bill brown, and the throat of a much paler yellow. This last, I have good reason to suspect, has been described by Europeans as a separate species; and that from Louisiana, referred to in the synonymes, appears evidently the same as the former, the chief difference, according to Buffon, being in its wedged tail, which is likewise the true form of our own species; so that this error corrected will abridge the European nomenclature of two species. Many more examples of this kind will occur in the course of our descriptions.

SYLVIA MARILANDICA.

MARYLAND YELLOW-THROAT.

[Plate XVIII.—Fig. 4.—*Female.*]

THE male of this species having been represented in Plate VI, fig. 1, accompanied by a particular detail of its manners, I have little farther to add here relative to this bird. I found several of them round Wilmington, North Carolina, in the month of January, along the margin of the river, and by the Cypress swamp, on the opposite side. The individual, from which the figure in the plate was taken, was the actual nurse of the young Cow-pen Bunting, which it is represented in the act of feeding.

It is five inches long, and seven in extent; the whole upper parts green olive, something brownish on the neck, tips of the wings and head; the lower parts yellow, brightest on the throat and vent; legs flesh coloured. The chief difference between this and the male in the markings of their plumage, is, that the female is destitute of the black bar through the eyes, and the bordering one of pale bluish white.

SPECIES 4. SYLVIA REGULUS.

GOLDEN-CRESTED WREN.

[Plate VIII.—Fig. 2.]

Motacilla regulus, LINN. *Syst.* I, 338, 48.—LATH. *Syn.* IV, 508, 145.—EDW. 254.—PEALE'S *Museum*, No. 7246.

THIS diminutive species is a frequent associate of the one last described, and seems to be almost a citizen of the world at large, having been found not only in North and South America, the West Indies and Europe, but even in Africa and India. The specimen from Europe, in Mr. Peale's collection, appears to be in nothing specifically different from the American; and the very accurate description given of this bird by the Count de Buffon, agrees in every respect with ours. Here, as in Europe, it is a bird of passage, making its first appearance in Pennsylvania early in April, among the blossoms of the maple, often accompanied by the Ruby-crowned Wren, which, except in the markings of the head, it very much resembles. It is very frequent among evergreens, such as the pine, spruce, cedar, juniper, &c. and in the Fall is generally found in company with the two species of Titmouse, Brown Creeper, and small Spotted Woodpecker. It is an active, unsuspicious, and diligent little creature, climbing and hanging, occasionally, among the branches, and sometimes even on the body of the tree, in search of the larvæ of insects, attached to the leaves and stems, and various kinds of small flies, which it frequently seizes on wing. As it retires still farther north to breed, it is seldom seen in Pennsylvania from May to October; but is then numerous in orchards, feeding among the leaves of the apple-trees, which, at that season, are infested with vast numbers of small black winged insects. Its chirp is feeble, not much louder than that

of a mouse; though where it breeds the male is said to have a variety of sprightly notes. It builds its nest frequently on the branches of an evergreen, covers it entirely round, leaving a small hole on one side for entrance, forming it outwardly of moss and lichens, and lining it warmly with down. The female lays six or eight eggs, pure white, with a few minute specks of dull red. Dr. Latham, on whose authority this is given, observes, "it seems to frequent the oak trees in preference to all others. I have more than once seen a brood of these in a large oak in the middle of a lawn, the whole little family of which, as soon as able, were in perpetual motion, and gave great pleasure to many who viewed them. The nest of one of these has also been made in a garden on a fir tree; it was composed of moss, the opening on one side, in shape roundish; it was lined with a downy substance, fixed with small filaments. It is said to sing very melodiously, very like the Common Wren, but weaker."* In Pennsylvania they continue with us from October to December, and sometimes to January.

The Golden-crested Wren is four inches long, and six inches and a half in extent; back a fine yellow olive; hind head and sides of the neck inclining to ash; a line of white passes round the frontlet extending over and beyond the eye on each side; above this another line or strip of deep black passes in the same manner, extending farther behind; between these two strips of black lies a bed of glossy golden yellow, which being parted a little, exposes another of a bright flame colour, extending over the whole upper part of the head; when the little warbler flits among the branches in pursuit of insects, he opens and shuts this golden ornament with great adroitness, which produces a striking and elegant effect; lores marked with circular points of black; below the eye is a rounding spot of dull white; from the upper mandible to the bottom of the ear feathers runs a line of black, accompanied by another of white from the lower mandible; breast light cream colour; sides under the wings and vent the same; wings dusky, edged exteriorly with yellow olive;

* Synopsis 11, 509.

greater wing coverts tipped with white, immediately below which a spot of black extends over several of the secondaries; tail pretty long, forked, dusky, exterior vanes broadly edged with yellow olive; legs brown, feet and claws yellow; bill black, slender, straight, evidently of the *Muscicapa* form, the upper mandible being notched at the point, and furnished at the base with bristles, that reach half way to its point; but what seems singular and peculiar to this little bird, the nostril on each side is covered by a single feather, that much resembles the antennæ of some butterflies, and is half the length of the bill. Buffon has taken notice of the same in the European. Inside of the mouth a reddish orange; claws extremely sharp, the hind one the longest. In the female the tints and markings are nearly the same, only the crown or crest is pale yellow. These birds are numerous in Pennsylvania in the month of October, frequenting bushes that overhang streams of water, alders, briars, and particularly apple trees, where they are eminently useful in destroying great numbers of insects, and are at that season extremely fat.

*SPECIES 5. SYLVIA DOMESTICA.**

HOUSE WREN.

[Plate VIII.—Fig. 3.]

Motacilla domestica, (*Regulus rufus*), BARTRAM, 291.—PEALE'S
Museum, No. 7283.

THIS well known and familiar bird arrives in Pennsylvania about the middle of April; and about the eighth or tenth of May, begins to build its nest, sometimes in the wooden cornice under the eaves, or in a hollow cherry tree; but most commonly in small boxes, fixed on the top of a pole, in or near the garden, to which he is extremely partial, for the great number of caterpillars and other larvæ with which it constantly supplies him. If all these conveniences are wanting, he will even put up with an old hat, nailed on the weather boards, with a small hole for entrance; and if even this be denied him, he will find some hole, corner or crevice about the house, barn or stable, rather than abandon the dwellings of man. In the month of June, a mower hung up his coat, under a shed, near a barn; two or three days elapsed before he had occasion to put it on again; thrusting his arm up the sleeve he found it completely filled with some rubbish, as he expressed it, and, on extracting the whole mass, found it to be the nest of a Wren completely finished, and lined with a large quantity of feathers. In his retreat he was followed by the little forlorn proprietors, who scolded him with great vehemence for thus ruining the whole economy of their household affairs. The twigs with which the outward parts of the nest are constructed are short and crooked that they may the better hook in with one another, and the hole or entrance is so much shut up to prevent the intrusion of snakes or cats, that it appears almost impossible the body of the bird could be admitted;

* *Troglodytes æden*, VIEILL. Ois. de l'Am. Sept. pl. 107.

within this is a layer of fine dried stalks of grass, and lastly feathers. The eggs are six or seven, and sometimes nine, of a red purplish flesh colour, innumerable fine grains of that tint being thickly sprinkled over the whole egg. They generally raise two broods in a season; the first about the beginning of June, the second in July.

This little bird has a strong antipathy to cats; for having frequent occasion to glean among the currant bushes, and other shrubbery in the garden, those lurking enemies of the feathered race often prove fatal to him. A box fitted up in the window of the room where I slept, was taken possession of by a pair of Wrens. Already the nest was built, and two eggs laid, when one day the window being open, as well as the room door, the female Wren venturing too far into the room to reconnoitre, was sprung upon by grimalkin, who had planted herself there for the purpose; and before relief could be given was destroyed. Curious to see how the survivor would demean himself, I watched him carefully for several days. At first he sung with great vivacity for an hour or so, but becoming uneasy, went off for half an hour; on his return he chanted again as before, went to the top of the house, stable, and weeping willow, that she might hear him; but seeing no appearance of her, he returned once more, visited the nest, ventured cautiously into the window, gazed about with suspicious looks, his voice sinking to a low melancholy note as he stretched his little neck about in every direction. Returning to the box he seemed for some minutes at a loss what to do, and soon after went off, as I thought, altogether, for I saw him no more that day. Towards the afternoon of the second day, he again made his appearance, accompanied with a new female, who seemed exceedingly timorous and shy; and who after great hesitation entered the box; at this moment the little widower, or bridegroom, seemed as if he would warble out his very life with ecstasy of joy. After remaining about half a minute in, they both flew off, but returned in a few minutes, and instantly began to carry out the eggs, feathers, and some of the sticks, supplying the place of the two

latter with materials of the same sort; and ultimately succeeded in raising a brood of seven young, all of which escaped in safety.

The immense number of insects which this sociable little bird removes from the garden and fruit trees, ought to endear him to every cultivator, even if he had nothing else to recommend him; but his notes, loud, sprightly, tremulous, and repeated every few seconds with great animation, are extremely agreeable. In the heat of summer, families in the country often dine under the piazza, adjoining green canopies of mantling grape vines, gourds, &c. while overhead the trilling vivacity of the Wren, mingled with the warbling mimicry of the Mocking-bird, and the distant softened sounds of numerous other songsters that we shall hereafter introduce to the reader's acquaintance, form a soul-soothing and almost heavenly music, breathing peace, innocence and rural repose. The European, who judges of the song of this species by that of his own Wren (*M. troglodytes*), will do injustice to the former, as in strength of tone, and execution, it is far superior, as well as the bird is in size, figure and elegance of markings, to the European one. Its manners are also different; its sociability greater. It is no *underground* inhabitant; its nest is differently constructed, the number of its eggs fewer; it is also migratory; and has the tail and bill much longer. Its food is insects and caterpillars, and while supplying the wants of its young, it destroys, on a moderate calculation, many hundreds a day, and greatly circumscribes the ravages of these vermin. It is a bold and insolent bird against those of the Titmouse or Woodpecker kind that venture to build within its jurisdiction; attacking them without hesitation, though twice its size, and generally forcing them to decamp. I have known him drive a pair of swallows from their newly formed nest, and take immediate possession of the premises, in which his female also laid her eggs and reared her young. Even the Blue-bird, who claims an equal, and sort of hereditary right to the box in the garden, when attacked by this little impertinent, soon relinquishes the contest, the mild placidness of his disposition not being a match for the fiery impetuosity of his little

antagonist. With those of his own species, who settle and build near him, he has frequent squabbles; and when their respective females are sitting, each strains his whole powers of song to excel the other. When the young are hatched, the hurry and press of business leave no time for disputing, so true it is that idleness is the mother of mischief. These birds are not confined to the country; they are to be heard on the tops of the houses in the most central part of our cities, singing with great energy. Scarce a house or cottage in the country is without at least a pair of them, and sometimes two; but unless where there is a large garden, orchard, and numerous outhouses, it is not often the case that more than one pair reside near the same spot, owing to their party disputes and jealousies. It has been said by a friend to this little bird, that "the esculent vegetables of a whole garden may, perhaps, be preserved from the depredations of different species of insects, by *ten or fifteen pair* of these small birds,"* and probably they might, were the combination practicable; but such a congregation of Wrens, about one garden, is a phenomenon not to be expected but from a total change in the very nature and disposition of the species.

Having seen no accurate description of this bird in any European publication, I have confined my references to Mr. Bartram and Mr. Peale; but though Europeans are not ignorant of the existence of this bird, they have considered it, as usual, merely as a slight variation from the original stock (*M. troglodytes*), their own Wren; in which they are, as usual, mistaken; the length and bent form of the bill, its notes, migratory habits, long tail, and red eggs, are sufficient specific differences.

The House wren inhabits the whole of the United States, in all of which it is migratory. It leaves Pennsylvania in September; I have sometimes, though, rarely, seen it in the beginning of October. It is four inches and a half long, and five and three-quarters in extent, the whole upper parts of a deep brown, transversely crossed with black, except the head and neck, which is plain; throat, breast and cheeks light clay-colour; belly

* Barton's Fragments, Part I, p. 22.

and vent mottled with black, brown and white; tail long, cuneiform, crossed with black; legs and feet light clay-coloured; bill black, long, slightly curved, sharp pointed, and resembling that of the genus *Certhia* considerably; the whole plumage below the surface is bluish ash; that on the rump having large round spots of white, not perceivable unless separated with the hand. The female differs very little in plumage from the male.

SPECIES 6. SYLVIA TROGLODYTES?*

WINTER WREN.

[Plate VIII.—Fig. 6.]

Motacilla troglodytes? LINN.—PEALE'S *Museum*, No. 7284.

THIS little stranger visits us from the north in the month of October, sometimes remaining with us all the winter, and is always observed early in spring on his rout back to his breeding place. In size, colour, song and manners he approaches nearer to the European Wren (*M. troglodytes*), than any other species we have. During his residence here, he frequents the projecting banks of creeks, old roots, decayed logs, small bushes and rushes near watery places; he even approaches the farm-house, rambles about the wood-pile, creeping among the interstices like a mouse. With tail erect, which is his constant habit, mounted on some projecting point or pinnacle, he sings with great animation. Even in the yards, gardens and outhouses of the city, he appears familiar, and quite at home. In short, he possesses almost all the habits of the European species. He is, however, migratory, which may be owing to the superior coldness of our continent. Never having met with the nest and eggs, I am unable to say how nearly they approximate to those of the former.

I can find no precise description of this bird, as an American species, in any European publication. Even some of our own naturalists seem to have confounded it with another very different bird, the *Marsh Wren*,† which arrives in Pennsylvania from

* Wilson appears to be correct in considering this species the same as the European. The following synonymes may be given:—*Motacilla troglodytes*, LINN. *Syst. Ed.* 10, 1, 188.—GMEL. *Syst.* 1, 993.—*Sylvia troglodytes*, LATH. *Ind. Orn.* 11, p. 547.—*Le Roitelet*, BUFF. *Pl. En.* 651, fig. 2.

† See Professor Barton's observations on this subject, under the article *Motacilla troglodytes?* "Fragments," &c. p. 18, *Ib.* p. 12.

the south in May, builds a globular or pitcher-shaped nest, which it suspends among the rushes and bushes by the river side, lays five or six eggs of a dark fawn colour, and departs again in September. But the colours and markings of that bird are very unlike those of the Winter Wren, and its song altogether different. The circumstance of the one arriving from the north as the other returns to the south, and *vice versa*, with some general resemblance between the two, may have occasioned this mistake. They, however, not only breed in different regions, but belong to different genera, the Marsh Wren being decisively a species of *Certhia*, and the Winter Wren a true *Motacilla*. Indeed we have no less than five species of these birds in Pennsylvania, that by a superficial observer would be taken for one and the same; but between each of which, nature has drawn strong, discriminating and indelible lines of separation. These will be pointed out in their proper places.

If this bird, as some suppose, retires only to the upper regions of the country, and mountainous forests, to breed, as is the case with some others, it will account for his early and frequent residence along the Atlantic coast during the severest winters; though I rather suspect that he proceeds considerably to the northward; as the Snow-bird (*F. Hudsonia*), which arrives about the same time with the Winter Wren, does not even breed at Hudson's Bay; but passes that settlement in June, on his way to the northward; how much farther is unknown.

The length of the Winter Wren is three inches and a half, breadth five inches; the upper parts are of a general dark brown, crossed with transverse touches of black, except the upper parts of the head and neck, which are plain; the black spots on the back terminate in minute points of dull white; the first row of wing coverts is also marked with specks of white at the extremities of the black, and tipped minutely with black; the next row is tipped with points of white; the primaries are crossed with alternate rows of black and cream colour; inner vanes of all the quills dusky, except the three secondaries next the body; tips of the wings dusky; throat, line over the eye, sides of the neck, ear-

feathers and breast, dirty white, with minute transverse touches of a drab or clay colour; sides under the wings speckled with dark brown, black, and dirty white; belly and vent thickly mottled with sooty black, deep brown, and pure white, in transverse touches; tail very short, consisting of twelve feathers, the exterior one, on each side, a quarter of an inch shorter, the rest lengthening gradually to the middle ones; legs and feet a light clay colour, and pretty stout; bill straight, slender, half an inch long, not notched at the point, of a dark brown or black above, and whitish below; nostril oblong; eye light hazel. The female wants the points of white on the wing coverts. The food of this bird is derived from that great magazine of so many of the feathered race, *insects and their larvæ*, particularly such as inhabit watery places, roots of bushes, and piles of old timber.

It were much to be wished that the summer residence, nest and eggs, of this bird were precisely ascertained, which would enable us to determine whether it be, what I strongly suspect it is, the same species as the common domestic Wren of Britain.

SPECIES 7. *SYLVIA FLAVICOLLIS*.

YELLOW-THROAT WARBLER.

[Plate XII.—Fig. 6.]

Yellow-throat Warbler, *Arct. Zool.* p. 400, No. 286.—CATESB. I, 62.—LATH. II, 441.—*La Mesange grise a gorge jaune*, BUFF. v, 454.—*La gorge jaune de St. Domingue*, *Pl. Enl.* 686, fig. 1.*

THE habits of this beautiful species, like those of the preceding, are not consistent with the shape and construction of its bill; the former would rank it with the Titmouse, or with the Creepers, the latter is decisively that of the Warbler. The first opportunity I had of examining a living specimen of this bird was in the southern parts of Georgia, in the month of February. Its notes which were pretty loud and spirited, very much resembled those of the Indigo-bird. It continued a considerable time on the same pine tree, creeping around the branches and among the twigs, in the manner of the Titmouse, uttering its song every three or four minutes. On flying to another tree it frequently alighted on the body, and ran nimbly up or down, spirally and perpendicularly, in search of insects. I had afterwards many opportunities of seeing others of the same species, and found them all to correspond in these particulars. This was about the 24th of February, and the first of their appearance there that spring, for they leave the United States about three months during winter, and consequently go to no great distance. I had been previously informed that they also pass the summer in Virginia and in the southern parts of Maryland; but they very rarely proceed as far north as Pennsylvania.

* *Motacilla pensilis*, GMEL. I, p. 960.—*Motacilla flavicollis*, GMEL. *Syst.* I, 959.—*Sylvia pensilis*, LATH. *Ind. Orn.* II, p. 520.—VIEILL. *Ois. de l'Am. Sept.* pl. 72.

This species is five inches and a half in length, and eight and a half broad; the whole back, hind head and rump is a fine light slate colour; the tail is somewhat forked, black, and edged with light slate; the wings are also black, the three shortest secondaries broadly edged with light blue; all the wing quills are slightly edged with the same; the first row of wing coverts are tipped and edged with white, the second wholly white, or nearly so; the frontlet, ear feathers, lores and above the temple, are black; the line between the eye and nostril, whole throat and middle of the breast brilliant golden yellow; the lower eye-lid, line over the eye, and spot behind the ear feathers, as well as the whole lower parts, are pure white; the yellow on the throat is bordered with touches of black, which also extend along the sides under the wings; the bill is black, and faithfully represented in the figure; the legs and feet yellowish brown; the claws extremely fine pointed; the tongue rather cartilaginous, and lacerated at the end. The female has the wings of a dingy brown, and the whole colours, particularly the yellow on the throat, much duller; the young birds of the first season are without the yellow.

SPECIES 8. SYLVIA CASTANEA.

BAY-BREASTED WARBLER.

[Plate XIV.—Fig. 4.]

Parus peregrinus, the little *Chocolate-breasted Titmouse*, BAR-
TRAM, p. 292.—PEALE'S *Museum*, No. 7311.

THIS very rare species passes through Pennsylvania about the beginning of May, and soon disappears. It has many of the habits of the Titmouse, and all their activity; hanging among the extremity of the twigs, and darting about from place to place, with restless diligence, in search of various kinds of the larvæ of insects. It is never seen here in summer, and very rarely on its return, owing, no doubt, to the greater abundance of foliage at that time, and to the silence and real scarcity of the species. Of its nest and eggs we are altogether uninformed.

The length of this bird is five inches, breadth eleven; throat, breast, and sides under the wings, pale chestnut or bay; forehead, cheeks, line over, and strip through the eye, black; crown deep chestnut; lower parts dull yellowish white; hind head and back streaked with black on a grayish buff ground; wings brownish black, crossed with two bars of white; tail forked, brownish black, edged with ash, the three exterior feathers marked with a spot of white on their inner edges; behind the eye is a broad oblong spot of yellowish white. The female has much less of the bay colour on the breast; the black on the forehead is also less and of a brownish tint. The legs and feet, in both, are dark ash, the claws extremely sharp for climbing and hanging; the bill is black; irides hazel.

The ornithologists of Europe take no notice of this species, and have probably never met with it. Indeed it is so seldom

seen in this part of Pennsylvania that few even of our own writers have mentioned it.

I lately received a very neat drawing of this bird, done by a young lady in Middleton, Connecticut, where it seems also to be a rare species.

SPECIES 9. SYLVIA PENNSYLVANICA.

CHESTNUT-SIDED WARBLER.

[Plate XIV.—Fig. 5.]

LINN. *Syst.* 333.—*Red-throated Flycatcher*, EDW. 301.—*Bloody-side Warbler*, TURTON, *Syst.* I, p. 596.—*La figuier a poitrine rouge*, BUFF. V, 308.—BRISS. *App.* 105.—LATH. II, 490.—*Arct. Zool.* p. 405, No. 298.—PEALE'S *Museum*, No. 7006.*

Of this bird I can give but little account. It is one of those transient visitors that pass through Pennsylvania in April and May, on their way farther north to breed. During its stay here, which seldom exceeds a week or ten days, it appears actively engaged among the opening buds and young leaves, in search of insects; has no song but a feeble chirp or twitter; and is not numerous. As it leaves us early in May, it probably breeds in Canada, or perhaps some parts of New England; though I have no certain knowledge of the fact. In a whole day's excursion it is rare to meet with more than one or two of these birds; though a thousand individuals of some species may be seen in the same time. Perhaps they may be more numerous on some other part of the continent.

The length of this species is five inches, the extent seven and three quarters. The front, line over the eye, and ear feathers are pure white, upper part of the head brilliant yellow; the lores, and space immediately below, is marked with a triangular patch of black; the back and hind head is streaked with gray, dusky,

* Additional synonyms:—*Motacilla icterocephala*, LINN. *Syst.* I, p. 325.—GMEL. *Syst.* I, p. 980.—*Sylvia icterocephala*, LATH. *Ind. Orn.* II, p. 538.—VIEIL. *Ois. de l'Am. Sept.* pl. 90.—*Sylvia Pennsylvanica*, GMEL. *Syst.* I, p. 971.—LATH. *Ind. Orn.* II, p. 540.—*Ficedula Canadensis icterocephalus*, BRISS. III, p. 517, 64, t. 27, f. 2.—*Id.* 8vo. I, p. 451.—*Ficedula pennsylvanica icterocephalus*, BRISS. *App.* p. 105.—*Id.* 8vo. I, p. 458, 78.

black and dull yellow; wings black, primaries edged with pale blue, the first and second row of coverts broadly tipped with pale yellow, secondaries broadly edged with the same; tail black, handsomely forked, exteriorly edged with ash, the inner webs of the three exterior feathers with each a spot of white; from the extremity of the black at the lower mandible, on each side, a streak of deep reddish chestnut descends along the sides of the neck, and under the wings to the root of the tail; the rest of the lower parts are pure white; legs and feet ash; bill black; irides hazel. The female has the hind head much lighter, and the chestnut on the sides is considerably narrower and not of so deep a tint.

Turton and some other writers have bestowed on this little bird the singular epithet of *bloody-sided*, for which I was at a loss to know the reason, the colour of that part being a plain chestnut; till on examining Mr. Edwards's coloured figure of this bird in the public library of this city, I found its side tinged with a brilliant blood colour. Hence, I suppose, originated the name!

SPECIES 10. SYLVIA PHILADELPHIA.

MOURNING WARBLER.

[Plate XIV.—Fig. 6.]

I HAVE now the honour of introducing to the notice of naturalists and others, a very modest and neat little species, which has hitherto eluded their research. I must also add, with regret, that it is the only one of its kind I have yet met with. The bird from which the figure in the plate was taken was shot in the early part of June, on the border of a marsh, within a few miles of Philadelphia. It was flitting from one low bush to another, very busy in search of insects; and had a sprightly and pleasant warbling song, the novelty of which first attracted my attention. I have traversed the same and many such places, every spring and summer since, in expectation of again meeting with some individual of the species, but without success. I have, however, the satisfaction to say, that the drawing was done with the greatest attention to peculiarity of form, markings and tint of plumage; and the figure on the plate is a good resemblance of the original. I have yet hopes of meeting, in some of my excursions, with the female; and should I be so fortunate, shall represent her in some future volume of the present work, with such further remarks on their manners, &c. as I may then be enabled to make.

There are two species mentioned by Turton to which the present has some resemblance, *viz.* *Motacilla mitrata*, or Mitted Warbler, and *M. cucullata*, or Hooded Warbler, both birds of the United States, or more properly a single bird; for they are the same species twice described, namely, the Hooded Warbler. The difference, however, between that and the present is so striking, as to determine this at once to be a very distinct

species. The singular appearance of the head, neck and breast, suggested the name.

The Mourning Warbler is five inches long, and seven in extent; the whole back, wings and tail, are of a deep greenish olive, the tips of the wings and the centre of the tail feathers excepted, which are brownish; the whole head is of a dull slate colour; the breast is ornamented with a singular crescent of alternate transverse lines of pure glossy white, and very deep black; all the rest of the lower parts are of a brilliant yellow; the tail is rounded at the end; legs and feet a pale flesh colour; bill deep brownish black above, lighter below; eye hazel.

SPECIES 11. SYLVIA SOLITARIA.

BLUE-WINGED YELLOW WARBLER.

[Plate XV.—Fig. 4.]

Parus aureus alis cæruleis, BARTRAM, p. 292.—EDW. pl. 277, upper figure.—*Pine Warbler*, *Arct. Zool.* p. 412, No. 318.—PEALE'S *Museum*, No. 7307.

THIS bird has been mistaken for the *Pine Creeper* of Catesby. It is a very different species. It comes to us early in May from the south; haunts thickets and shrubberies, searching the branches for insects; is fond of visiting gardens, orchards, and willow trees, of gleaning among blossoms, and currant bushes; and is frequently found in very sequestered woods, where it generally builds its nest. This is fixed in a thick bunch or tussock of long grass, sometimes sheltered by a briar bush. It is built in the form of an inverted cone, or funnel, the bottom thickly bedded with dry beech leaves, the sides formed of the dry bark of strong weeds, lined within with fine dry grass. These materials are not placed in the usual manner *circularly*, but shelving downwards on all sides from the top; the mouth being wide, the bottom very narrow, filled with leaves, and the eggs or young occupying the middle. The female lays five eggs, pure white, with a few very faint dots of reddish near the great end; the young appear the first week in June. I am not certain whether they raise a second brood in the same season.

I have met with several of these nests, always in a retired though open part of the woods, and very similar to each other.

The first specimen of this bird taken notice of by European writers was transmitted, with many others, by Mr. William Bartram to Mr. Edwards, by whom it was drawn and etched

in the 277th plate of his Ornithology. In his remarks on this bird he seems at a loss to determine whether it is not the Pine Creeper of Catesby;* a difficulty occasioned by the very imperfect colouring and figure of Catesby's bird. The Pine Creeper, however, is a much larger bird, is of a dark yellow olive above, and orange yellow below; has all the habits of a Creeper, alighting on the trunks of the pine trees, running nimbly round them, and, according to Mr. Abbot, builds a pensile nest. I observed thousands of them in the pine woods of Carolina and Georgia, where they are resident, but have never met with them in any part of Pennsylvania.

This species is five inches and a half long, and seven and a half broad; hind head and whole back a rich green olive; crown and front orange yellow; whole lower parts yellow, except the vent feathers, which are white; bill black above, lighter below; lores black; the form of the bill approximates a little to that of the Finch; wings and tail deep brown, broadly edged with pale slate, which makes them appear wholly of that tint, except at the tips; first and second row of coverts tipped with white, slightly stained with yellow; the three exterior tail feathers have their inner vanes nearly all white; legs pale bluish; feet dirty yellow; the two middle tail feathers are pale slate. The female differs very little in colour from the male.

This species very much resembles the Prothonotary Warbler of Pennant and Buffon; the only difference I can perceive on comparing specimens of each, is that the yellow of the Prothonotary is more of an orange tint, and the bird somewhat larger.

* Catesby, Car. vol. i, pl. 61.

SPECIES 12. SYLVIA CHRYSOPTERA.

GOLDEN-WINGED WARBLER.

[Plate XV.—Fig. 5.]

EDW. 299.—*Le figuier aux ailes dorees*, BUFF. v, 311.—LATH. II, 492.—Arct. Zool. 403. No. 295. *Ib.* No. 296.—*Motacilla chrysoptera*, TURT. Syst. I, 597.—*Motacilla flavifrons*, *Yellow-fronted Warbler*, *Id.* 601.—*Parus alis aureis*, BARTRAM, p. 292.—PEALE'S *Museum*, No. 7010.*

THIS is another spring passenger through the United States to the North. This bird, as well as fig. 4, from the particular form of its bill, ought rather to be separated from the Warblers; or, along with several others of the same kind, might be arranged as a sub genus, or particular family of that tribe, which might with propriety be called *Worm-eaters*, the *Motacilla vermivora* of Turton having the bill exactly of this form. The habits of these birds partake a good deal of those of the Titmouse; and in their language and action they very much resemble them. All that can be said of this species is, that it appears in Pennsylvania for a few days, about the last of April or beginning of May, darting actively among the young leaves and opening buds, and is rather a scarce species.

The Golden-winged Warbler is five inches long, and seven broad; the crown golden yellow; the first and second row of wing coverts of the same rich yellow; the rest of the upper parts a deep ash, or dark slate colour; tail slightly forked, and, as well as the wings, edged with whitish; a black band passes

* *Motacilla chrysoptera*, LINN. Syst. I, p. 333.—GMEL. Syst. I, p. 971.—*Motacilla flavifrons*, GMEL. Syst. I, p. 976.—*Sylvia chrysoptera*, LATH. *Ind. Orn.* II, p. 541.—VIEILL. Ois. de l'Am. Sept. pl. 97. *Sylvia flavifrons*, LATH. *Ind. Orn.* II, p. 527.

through the eye, and is separated from the yellow of the crown by a fine line of white; chin and throat black, between which and that passing through the eye runs a strip of white, as in the figure; belly and vent white; bill black, gradually tapering to a sharp point; legs dark ash; irides hazel.

Pennant has described this species twice, first as the Golden-winged Warbler, and immediately after as the Yellow-fronted Warbler. See the synonyms at the beginning of this article.

SPECIES 13. SYLVIA CITRINELLA.

BLUE-EYED YELLOW WARBLER.

[Plate XV.—Fig. 5.]

Yellow-poll Warbler, LATH. *Syn.* v. II, p. 515. No. 148.—*Arct. Zool.* p. 402, No. 292.—*Le Figuier tachete*, BUFF. *Ois.* v, p. 285.—*Motacilla æstiva*, TURTON'S *Syst.* p. 615.—*Parus luteus*, *Summer Yellow-bird*, BARTRAM, p. 292.—PEALE'S *Museum*, No. 7266.*

THIS is a very common summer species, and appears almost always actively employed among the leaves and blossoms of the willows, snow-ball shrub, and poplars, searching after small green caterpillars, which are its principal food. It has a few shrill notes, uttered with emphasis, but not deserving the name of song. It arrives in Pennsylvania about the beginning of May; and departs again for the south about the middle of September. According to Latham it is numerous in Guiana, and is also found in Canada. It is a very sprightly, unsuspicious and familiar little bird; is often seen in and about gardens, among the blossoms of fruit trees and shrubberies; and, on account of its colour, is very noticeable. Its nest is built with great neatness, generally in the triangular fork of a small shrub, near, or among, briar bushes. Outwardly it is composed of flax or tow, in thick circular layers, strongly twisted round the twigs that rise through its sides, and lined within with hair and the soft downy substance from the stalks of fern. The eggs

* Additional synonyms:—*Motacilla æstiva*, GMEL. *Syst.* I, p. 996.—*Sylvia æstiva*, LATH. *Ind. Orn.* II, p. 551.—VIEILL. *Ois. de l'Am. Sept.* pl. 95.—*Motacilla albicollis*, GMEL. *Syst.* I, p. 983, young.—*Sylvia albicollis*, LATH. *Ind. Orn.* II, p. 535, young.—*Ficedula Canadensis*, BRISS. III, p. 492, 51, t. 26, fig. 3, male adult.—*Ficedula dominicensis*, BRISS. III, p. 494, 52, t. 26, f. 5.—*Figuier de Canada*, BUFF. *Pl. Enl.* 58, f. 2, adult male.

are four, or five, of a dull white, thickly sprinkled near the great end with specks of pale brown. They raise two broods in the season. This little bird, like many others, will feign lameness to draw you away from its nest, stretching out his neck, spreading and bending down his tail until it trails along the branch, and fluttering feebly along to draw you after him; sometimes looking back to see if you are following him, and returning back to repeat the same manœuvres in order to attract your attention. The male is most remarkable for this practice.

The Blue-eyed Warbler is five inches long and seven broad; hind head and back greenish yellow; crown, front and whole lower parts rich golden yellow; breast and sides streaked laterally with dark red; wings and tail deep brown, except the edges of the former and the *inner* vanes of the latter, which are yellow; the tail is also slightly forked; legs a pale clay colour; bill and eye-lids light blue. The female is of a less brilliant yellow, and the streaks of red on the breast are fewer and more obscure. Buffon is mistaken in supposing No. 1, of Pl. Enl. Plate lviii, to be the female of this species.

SPECIES 14. SYLVIA CANADENSIS.

BLACK-THROATED BLUE WARBLER.

[Plate XV.—Fig. 7.]

Motacilla Canadensis, LINN. *Syst.* 336.—*Le figuier bleu*, BUFF. V, 304. *Pl. Enl.* 685, fig. 2.—LATH. *Syn.* II, p. 487, No. 113.—EDW. 252.—*Arct. Zool.* p. 399, No. 285.—PEALE'S *Museum*, No. 7222.*

I KNOW little of this bird. It is one of those transient visitors that in the month of April pass through Pennsylvania on its way to the north to breed. It has much of the Flycatcher in its manners, though the form of its bill is decisively that of the Warbler. These birds are occasionally seen for about a week or ten days, viz. from the twenty-fifth of April to the end of the first week in May. I sought for them in the southern states, in winter, but in vain. It is highly probable that they breed in Canada; but the summer residents among the feathered race, on that part of the continent, are little known or attended to. The habits of the bear, the deer and beaver, are much more interesting to those people, and for a good substantial reason too, because more *lucrative*; and unless there should arrive an order from England for a cargo of skins of Warblers and Flycatchers, sufficient to make them an object worth speculation, we are likely to know as little of them hereafter as at present.

This species is five inches long, and seven and a half broad, and is wholly of a fine light slate colour above; the throat, cheeks, front and upper part of the breast is black; wings and tail dusky black, the primaries marked with a spot of white immediately below their coverts; tail edged with blue; belly

* *Sylvia cærulescens*, VIEILL. *Ois. de l'Am. Sept.* pl, 80.

and vent white; legs and feet dirty yellow; bill black, and beset with bristles at the base. The female is more of a dusky ash on the breast; and in some specimens nearly white.

They no doubt pass this way on their return in autumn, for I have myself shot several in that season; but as the woods are then still thick with leaves, they are much more difficult to be seen; and make a shorter stay than they do in spring.

SPECIES 15. SYLVIA VIRENS.

BLACK-THROATED GREEN WARBLER.

[Plate XVII.—Fig. 3.]

Motacilla virens, GMEL. *Syst.* 1, p. 985.—*Le figuier a cravate noire*, BUFF. v, p. 298.—*Black-throated Green Flycatcher*, EDW. t. 300.—*Green Warbler*, *Arct. Zool.* 11, No. 297.—LATH. *Syn.* iv, p. 484, 108.—TURTON, *Syst.* p. 607.—*Parus viridis gutture nigro*, the *Green Black-throated Flycatcher*, BARTRAM, p. 292.*

THIS is one of those transient visitors that pass through Pennsylvania, in the latter part of April and beginning of May, on their way to the north to breed. It generally frequents the high branches and tops of trees, in the woods, in search of the larvæ of insects that prey on the opening buds. It has a few singular chirruping notes; and is very lively and active. About the tenth of May it disappears. It is rarely observed on its return in the fall, which may probably be owing to the scarcity of its proper food at that season obliging it to pass with greater haste; or to the foliage, which prevents it and other passengers from being so easily observed. Some few of these birds, however, remain all summer in Pennsylvania, having myself shot three this season, in the month of June; but I have never yet seen their nest.

This species is four inches and three quarters long, and seven broad; the whole back, crown and hind head is of a rich yellowish green; front, cheeks, sides of the breast, and line over the eye, yellow; chin and throat black; sides under the wings spotted with black; belly and vent white; wings dusky black, marked with two white bars; bill black; legs and feet brownish yellow; tail dusky edged with light ash; the three exterior feathers spotted on their inner webs with white. The female is distinguished by having no black on the throat.

* *Sylvia virens*, VIEILL. *Ois. de l'Am. Sept. pl.* 80.

SPECIES 16. SYLVIA CORONATA.

YELLOW-RUMP WARBLER.

[Plate XVII.—Fig. 4.]

Motacilla maculosa,* GMEL. *Syst.* I, p. 984.—*Motacilla coronata*, LINN. *Syst.* I, p. 332, No. 31.—*Le figuier a tete cendree*,* BUFF. v, p. 291.—*Le Figuier couronne d'or*, *Id.* v, p. 312.—*Yellow-rump Flycatcher*,* EDW. t. 255.—*Golden-crowned Flycatcher*, *Id.* t. 298.—*Yellow-rump Warbler*,* ARCT. Zool. II, No. 288.—*Golden-crowned Warbler*, *Id.* II, No. 294.—LATH. *Syn.* IV, p. 481, No. 104. *Id.* *Supp.* p. 182. *Id.* *Syn.* IV, p. 486, No. 11.—TURTON, p. 599. *Id.* 606.—*Parus cedrus uropygio flavo*, the *Yellow Rump*, BARTRAM, p. 292.—*Parus aurio vertice*, the *Golden-crown Flycatcher*, *Id.* 292.—PEALE'S *Museum*, No. 7134.†

IN this beautiful little species we have another instance of the mistakes occasioned by the change of colour to which many

* These synonyms are incorrect, they should, according to Prince Musignano, be quoted under *Sylvia magnolia*, see species 19.

† As many nominal species have been made of this bird, we shall quote the following additional synonyms from Prince Musignano's *Obs.*—*Motacilla coronata*, LINN. GMEL. adult in summer dress.—*Motacilla canadensis*, sp. 27, LINN. adult in summer dress, unnatural by a band on the breast.—*Motacilla umbria*, GMEL. autumnal.—*Motacilla cincta*, GMEL. adult in summer dress, with the above mentioned band.—*Motacilla pinguis*, GMEL. autumnal.—*Sylvia coronata*, LATH. adult in summer dress. VIEILL. pl. 78, adult male in summer plumage. pl. 79, young.—*Sylvia umbria*, LATH. autumnal.—*Sylvia cincta*, LATH. adult in summer dress, deviating from nature by having the band on the breast; an error which probably originated in Brisson's figure.—*Sylvia pinguis*, LATH. autumnal.—*Ficedula pennsylvanica cinerea nœvia*, BRISS. adult in summer plumage.—*Ficedula canadensis cinerea*, BRISS. with the false band.—*Fauvette tachetée de la Louisiane*, BUFF. Pl. Enl. 709, fig. 1, autumnal.—*Figuier du Mississippi*, BUFF. Pl. Enl. 731, f. 2, young autumnal; erroneously quoted by GMELIN and LATHAM under *S. icterocephala*.—*Parus cedrus uropygio flavo*, BARTRAM, autumnal.—*Parus aureo vertice*, BARTRAM, summer dress.—*Parus virginianus*, LINN. GMEL. LATH. BRISS. autumnal.—*Sylvia flavopygia*, VIEILL. autumnal.—*Sylvia xanthorœa*, VIEILL. nouv. dict. autumnal.

of our birds are subject. In the present case this change is both progressive and periodical. The young birds of the first season are of a brown olive above, which continues until the month of February and March; about which time it gradually changes into a fine slate colour, as in the figure on the plate. About the middle of April this change is completed. I have shot them in all their gradations of change. While in their brown olive dress, the yellow on the sides of the breast and crown is scarcely observable, unless the feathers be parted with the hand; but that on the rump is still vivid; the spots of black on the cheek are then also obscured. The difference of appearance, however, is so great, that we need scarcely wonder that foreigners, who have no opportunity of examining the progress of these variations, should have concluded them to be two distinct species; and designated them as in the above synonymes.

This bird is also a passenger through Pennsylvania. Early in October he arrives from the north, in his olive dress, and frequents the cedar trees, devouring the berries with great avidity. He remains with us three or four weeks, and is very numerous wherever there are trees of the red cedar covered with berries. He leaves us for the south, and spends the winter season among the myrtle swamps of Virginia, the Carolinas and Georgia. The berries of the *Myrica cerifera*, both the large and dwarf kind, are his particular favourites. On those of the latter I found him feeding, in great numbers, near the sea shore, in the district of Maine, in October; and through the whole of the lower parts of the Carolinas, wherever the myrtles grew, these birds were numerous, skipping about with hanging wings, among the bushes. In those parts of the country they are generally known by the name of Myrtle-birds. Round Savannah, and beyond it as far as the Alatomaha, I found him equally numerous, as late as the middle of March, when his change of colour had considerably progressed to the slate hue. Mr. Abbot, who is well acquainted with this change, assured me, that they attain this rich slate colour fully before their departure from thence, which is about the last of March, and to the tenth of April. About the middle or twentieth of the same

month they appear in Pennsylvania, in full dress, as represented in the plate; and after continuing to be seen, for a week or ten days, skipping among the high branches and tops of the trees, after those larvæ that feed on the opening buds, they disappear until the next October. Whether they retire to the north, or to the high ranges of our mountains to breed, like many other of our passengers, is yet uncertain. They are a very numerous species, and always associate together in considerable numbers, both in spring, winter and fall.

This species is five inches and a half long, and eight inches broad; whole back, tail coverts, and hind head, a fine slate colour, streaked with black; crown, sides of the breast, and rump, rich yellow; wings and tail black, the former crossed with two bars of white, the three exterior feathers of the latter spotted with white; cheeks and front black; chin, line over and under the eye, white; breast light slate, streaked with black extending under the wings; belly and vent white, the latter spotted with black; bill and legs black. This is the spring and summer dress of the male; that of the female of the same seasons differs but little, chiefly in the colours being less vivid and not so strongly marked with a tincture of brownish on the back.

In the month of October the slate colour has changed to a brownish olive, the streaks of black are also considerably brown; and the white is stained with the same colour; the tail coverts, however, still retain their slaty hue, the yellow on the crown, and sides of the breast becomes nearly obliterated. Their only note is a kind of *chip*, occasionally repeated. Their motions are quick, and one can scarcely ever observe them at rest.

Though the form of the bill of this bird obliges me to arrange him with the Warblers; yet in his food and all his motions he is decisively a Flycatcher.

On again recurring to the descriptions in Pennant of the "Yellow-rump Warbler,"* "Golden-crowned W."† and "Belted W."‡ I am persuaded that the whole three have been drawn from the present species.

* Arct. Zool. p. 400, No. 188.

† Ib. No. 294.

‡ Ib. No. 306.

SYLVIA CORONATA.

YELLOW RUMP.

[Plate XLV.—Fig. 3.]

EDWARDS, 255.—*Arct. Zool.* II, p. 400, No. 288.

IN plate 17, fig. 4, this bird is represented in his perfect colours; the present figure exhibits him in his winter dress, as he arrives to us from the north early in September; the former shows him in his spring and summer dress, as he visits us from the south about the twentieth of March. These birds remain with us in Pennsylvania from September until the season becomes severely cold, feeding on the berries of the red cedar; and as December's snows come on they retreat to the lower countries of the southern states, where in February I found them in great numbers among the myrtles, feeding on the berries of that shrub; from which circumstance they are usually called in that quarter Myrtle-birds. Their breeding place I suspect to be in our northern districts, among the swamps and evergreens so abundant there, having myself shot them in the Great Pine swamp about the middle of May.

They range along our whole Atlantic coast in winter, seeming particularly fond of the red cedar and the myrtle; and I have found them numerous, in October, on the low islands along the coast of New Jersey in the same pursuit. They also dart after flies wherever they can see them, generally skipping about with the wings loose.

Length five inches and a quarter, extent eight inches; upper parts and sides of the neck a dark mouse brown, obscurely streaked on the back with dusky black; lower parts pale dull yellowish white; breast marked with faint streaks of brown; chin and vent white; rump vivid yellow; at each side of the breast,

and also on the crown, a spot of fainter yellow; this last not observable without separating the plumage; bill, legs and wings black; lesser coverts tipped with brownish white; tail coverts slate; the three exterior tail feathers marked on their inner vanes with white; a touch of the same on the upper and lower eyelid. Male and female at this season nearly alike. They begin to change about the middle of February, and in four or five weeks are in their slate coloured dress, as represented in the figure referred to.

SPECIES 17. SYLVIA CÆRULEA.

CERULEAN WARBLER.

[Plate XVII.—Fig. 5.]

PEALE'S *Museum*, No. 7309.

THIS delicate little species is now, for the first time, introduced to public notice. Except my friend Mr. Peale, I know of no other naturalist who seems to have hitherto known of its existence. At what time it arrives from the south I cannot positively say, as I never met with it in spring; but have several times found it during summer. On the borders of streams and marshes, among the branches of the poplar, it is sometimes to be found. It has many of the habits of the Flycatcher; though, like the preceding, from the formation of its bill we must arrange it with the Warblers. It is one of our scarce birds in Pennsylvania; and its nest has hitherto eluded my search. I have never observed it after the twentieth of August, and therefore suppose it retires early to the south.

This bird is four inches and a half long, and seven and a half broad; the front and upper part of the head is of a fine verditer blue; the hind head and back of the same colour, but not quite so brilliant; a few lateral streaks of black mark the upper part of the back; wings and tail black, edged with sky blue; the three secondaries next the body edged with white, and the first and second row of coverts also tipped with white; tail coverts large, black, and broadly tipped with blue; lesser wing coverts black, also broadly tipped with blue, so as to appear nearly wholly of that tint; sides of the breast spotted or streaked with blue; belly, chin and throat pure white; the tail is forked, the five lateral feathers on each side with each a spot of white, the two middle more slightly marked with the same; from the eye backwards

extends a line of dusky blue; before and behind the eye a line of white; bill dusky above, light blue below; legs and feet light blue.

SPECIES 18. SYLVIA PINUS.

PINE-CREEPING WARBLER.

[Plate XIX.—Fig. 4.]

Pine-Creeper, CATESB. I, 61.—PEALE'S *Museum*, No. 7312.

THIS species inhabits the pine woods of the Southern states, where it is resident, and where I first observed it, running along the bark of the pines; sometimes alighting and feeding on the ground, and almost always when disturbed flying up and clinging to the trunks of the trees. As I advanced towards the south it became more numerous. Its note is a simple reiterated *chirrup*, continued for four or five seconds.

Catesby first figured and described this bird; but so imperfectly as to produce among succeeding writers great confusion, and many mistakes as to what particular bird was intended. Edwards has supposed it to be the Blue-winged Yellow Warbler; Latham has supposed another species to be meant; and the worthy Mr. Pennant has been led into the same mistakes; describing the male of one species, and the female of another, as the male and female Pine-Creeper. Having shot and examined great numbers of these birds I am enabled to clear up these difficulties by the following descriptions, which will be found to be correct.

The Pine-creeping Warbler is five and a half inches long, and nine inches in extent; the whole upper parts are of a rich green olive, with a considerable tinge of yellow; throat, sides, and breast yellow; wings and tail brown with a slight cast of bluish, the former marked with two bars of white, slightly tinged with yellow; tail forked, and edged with ash; the three exterior feathers marked near the tip with a broad spot of white; middle of the belly and vent feathers white. The female is brown, tinged

with olive green on the back; breast dirty white, or slightly yellowish. The bill in both is truly that of a Warbler; and the tongue slender as in the *Motacilla* genus, notwithstanding the habits of the bird.

The food of these birds is the seeds of the pitch pine, and various kinds of bugs. The nest, according to Mr. Abbot, is suspended from the horizontal fork of a branch, and formed outwardly of slips of grape-vine bark, rotten wood, and caterpillars webs, with sometimes pieces of hornets nests interwoven; and is lined with dry pine leaves, and fine roots of plants. The eggs are four, white, with a few dark brown spots at the great end.

These birds, associating in flocks of twenty or thirty individuals, are found in the depth of the pine Barrens; and are easily known by their manner of rising from the ground and alighting on the *body* of the tree. They also often glean among the topmost boughs of the pine trees, hanging, head downwards, like the titmouse.

*SPECIES 19. SYLVIA MAGNOLIA.**

BLACK AND YELLOW WARBLER.

[Plate XXIII.—Fig. 2, Male.]

PEALE'S *Museum*, No. 7783.

THIS bird I first met with on the banks of the Little Miami, near its junction with the Ohio. I afterwards found it among the magnolias, not far from fort Adams on the Mississippi. These two, both of which happened to be males, are all the individuals I have ever shot of this species; from which I am justified in concluding it to be a very scarce bird in the United States. Mr. Peale, however, has the merit of having been the first to discover this elegant species, which he informs me he found several years ago not many miles from Philadelphia. No notice has ever been taken of this bird by any European naturalist whose works I have examined. Its notes, or rather chirpings, struck me as very peculiar and characteristic; but have no claim to the title of song. It kept constantly among the higher branches, and was very active and restless.

Length five inches, extent seven inches and a half; front, lores, and behind the ear, black; over the eye a fine line of white, and another small touch of the same immediately under; back nearly all black; shoulders thinly streaked with olive; rump yellow; tail coverts jet black; inner vanes of the lateral tail feathers white to within half an inch of the tip where they are black; two middle ones wholly black; whole lower parts rich yellow,

* *Molacilla maculosa*, GMEL. Syst. I, p. 984.—*Sylvia maculosa*, LATH. Ind. Orn. II, p. 536.—VIEILLOT, Ois de l'Am. Sept. pl. 93.—*Ficedula pensylvanica navia*, BRISS. III, p. 502, 56.—*Le Figuier a tete cendree*, BUFF. V, p. 291.—*Yellow-rumped Flycatcher*, EDW. Glean. pl. 255.—*Yellow-rumped warbler*, PENN. Arct. Zool. II, 288.—LATH. Syn. IV, p. 481. 104.

spotted from the throat downwards with black streaks; vent white; tail slightly forked; wings black, crossed with two broad transverse bars of white; crown fine ash; legs brown; bill black. Markings of the female not known.

SPECIES 20. SYLVIA BLACKBURNIA.

BLACKBURNIAN WARBLER.

[Plate XXIII.—Fig. 3.]

LATHAM, II, p. 461, No. 67.—PEALE'S *Museum*, No. 7060.*

THIS is another scarce species in Pennsylvania, making its appearance here about the beginning of May; and again in September on its return, but is seldom seen here during the middle of summer. It is an active silent bird. Inhabits also the state of New York, from whence it was first sent to Europe. Latham has numbered this as a variety of the *Yellow-fronted Warbler*, a very different species. The specimen sent to Europe, and first described by Pennant, appears also to have been a female, as the breast is said to be *yellow*, instead of the brilliant orange with which it is ornamented. Of the nest and habits of this bird I can give no account, as there is not more than one or two of these birds to be found here in a season, even with the most diligent search.

The Blackburnian Warbler is four inches and a half long, and seven in extent; crown black, divided by a line of orange; the black again bounded on the outside by a stripe of rich orange passing over the eye; under the eye a small touch of orange yellow; whole throat and breast rich fiery orange, bounded by spots and streaks of black; belly dull yellow, also streaked with black; vent white; back black, skirted with ash; wings the same, marked with a large lateral spot of white; tail slightly forked; the interior vanes of the three exterior feathers white; cheeks black; bill and legs brown. The female is yellow where the male is orange; the black streaks are also more obscure and less numerous.

* *Motacilla Blackburnia*, GMEL. *Syst.* I, p. 977.—*Sylvia Blackburnia*, LATH. *Ind. Orn.* II, p. 527.—VIEILL. *Ois. de l'Am. Sept.* pl. 96.

SPECIES 21. SYLVIA AUTUMNALIS.

AUTUMNAL WARBLER.

[Plate XXIII.—Fig. 4.]

THIS plain little species regularly visits Pennsylvania from the north in the month of October, gleaning among the willow leaves; but what is singular, is rarely seen in spring. From the first to the fifteenth of October, they may be seen in considerable numbers almost every day in gardens, particularly among the branches of the weeping willow, and seem exceedingly industrious. They have some resemblance in colour to the Pine-creeping Warbler; but do not run along the trunk like that bird; neither do they give a preference to the pines. They are also less. After the first of November they are no longer to be found, unless the season be uncommonly mild. These birds doubtless pass through Pennsylvania in spring, on their way to the north; but either make a very hasty journey, or frequent the tops of the tallest trees; for I have never yet met with one of them in that season; though in October I have seen more than a hundred in an afternoon's excursion.

Length four inches and three quarters, breadth eight inches; whole upper parts olive green, streaked on the back with dusky stripes; tail coverts ash, tipped with olive; tail black, edged with dull white; the three exterior feathers marked near the tip with white; wings deep dusky, edged with olive, and crossed with two bars of white; primaries also tipped, and three secondaries next the body edged, with white; upper mandible dusky brown; lower, as well as the chin and breast, dull yellow; belly and vent white; legs dusky brown; feet and claws yellow; a pale yellow ring surrounds the eye. The males of these birds often warble out some low, but very sweet notes, while searching among the leaves in autumn.

SPECIES 22. SYLVIA PROTONOTARIUS.

PROTHONOTARY WARBLER.

[Plate XXIV.—Fig. 3.]

Arct. Zool. p. 410.—BUFFON, v, 316.—LATHAM, II, 494. *Pl. Enl.* 704.—PEALE'S *Museum*, No. 7020.

THIS is an inhabitant of the same country as the Painted Bunting; and also a passenger from the south; with this difference, that the bird now before us seldom approaches the house or garden; but keeps among the retired deep and dark swampy woods, through which it flits nimbly in search of small caterpillars; uttering every now and then a few screaming notes, scarcely worthy of notice. They are abundant in the Mississippi and New Orleans territories, near the river; but are rarely found on the high ridges inland.

From the peculiar form of its bill, being roundish and remarkably pointed, this bird might with propriety be classed as a sub-genus, or separate family, including several others, viz. the Blue-winged Yellow Warbler; the Golden-crowned Warbler, the Golden-winged Warbler, the Worm-eating Warbler, and a few more. The bills of all these correspond nearly in form and pointedness, being generally longer, thicker at the base, and more round than those of the genus *Sylvia*, generally. The first mentioned species, in particular, greatly resembles this in its general appearance; but the bill of the Prothonotary is rather stouter, and the yellow much deeper, extending farther on the back; its manners and the country it inhabits are also different.

This species is five inches and a half long, and eight and a half in extent; the head, neck, and whole lower parts (except the vent) are of a remarkably rich and brilliant yellow, slightly

inclining to orange; vent white; back, scapulars and lesser wing coverts yellow olive; wings, rump and tail coverts a lead blue; interior vanes of the former black; tail nearly *even*, and black, broadly edged with blue, all the feathers, except the two middle ones, are marked on their inner vanes near the tip with a spot of white; bill long, stout, sharp pointed and wholly black; eyes dark hazel; legs and feet a leaden gray. The female differs in having the yellow and blue rather of a duller tint; the inferiority, however, is scarcely noticeable.

SPECIES 23. SYLVIA VERMIVORA.

WORM-EATING WARBLER.

[Plate XXIV.—Fig. 4.]

Arct. Zool. p. 406, No. 300.—EDWARDS, 305.—LATHAM, II, 499.
—*Le Demi-fin mangeur de vers*, BUFFON, V, 325.—PEALE'S
Museum, No. 6848.

THIS is one of the nimblest species of its whole family, inhabiting the same country with the preceding; but extending its migrations much farther north. It arrives in Pennsylvania about the middle of May; and leaves us in September. I have never yet met with its nest; but have seen them feeding their young about the twenty-fifth of June. This bird is remarkably fond of spiders, darting about wherever there is a probability of finding these insects. If there be a branch broken and the leaves withered, it shoots among them in preference to every other part of the tree, making a great rustling in search of its prey. I have often watched its manœuvres while thus engaged and flying from tree to tree in search of such places. On dissection I have uniformly found their stomachs filled with spiders or caterpillars, or both. Its note is a feeble chirp, rarely uttered.

The Worm-eater is five inches and a quarter in length, and eight inches in extent; back, tail, and wings a fine clear olive; tips and inner vanes of the wing quills a dusky brown; tail slightly forked, yet the exterior feathers are somewhat shorter than the middle ones; head and whole lower parts a dirty buff; the former marked with four streaks of black, one passing from each nostril, broadening as it descends the hind head; and one from the posterior angle of each eye; the bill is stout, straight, pretty thick at the base, roundish and tapering to a fine point; no bristles at the side of the mouth; tongue thin, and lacerated

at the tip; the breast is most strongly tinged with the orange buff; vent waved with dusky olive; bill blackish above, flesh coloured below; legs and feet a pale clay colour; eye dark hazel. The female differs very little in colour from the male.

On this species Mr. Pennant makes the following remarks. —“Does not appear in Pennsylvania till July in its passage northward. Does not return the same way; but is supposed to go beyond the mountains which lie to the west. This seems to be the case with all the transient vernal visitants of Pennsylvania.”* That a small bird should permit the whole spring and half of the summer to pass away before it thought of “passing to the north to breed,” is a circumstance one should think would have excited the suspicion of so discerning a naturalist as the author of Arctic Zoology, as to its truth. I do not know that this bird breeds to the northward of the United States. As to their returning home by “the country beyond the mountains,” this must doubtless be for the purpose of finishing the education of their striplings here, as is done in Europe, by making the *grand tour*. This by the by would be a much more convenient retrograde route for the *ducks* and *geese*; as, like the Kentuckians, they could take advantage of the current of the Ohio and Mississippi, to float down to the southward. Unfortunately however for this pretty theory, all our vernal visitants with which I am acquainted, are contented to plod home by the same regions through which they advanced; not even excepting the geese.

* Arct. Zool. p. 406.

SPECIES 24. SYLVIA PEREGRINA.

TENNESSEE WARBLER.

[Plate XXV.—Fig. 2.]

PEALE'S *Museum*, No. 7787.

THIS plain little bird has hitherto remained unknown. I first found it on the banks of Cumberland river, in the state of Tennessee, and supposed it to be a rare species, having since met with only two individuals of the same species. It was hunting nimbly among the young leaves, and like all the rest of the family of Worm-eaters, to which by its bill it evidently belongs, seemed to partake a good deal of the habits of the Titmouse. Its notes were few and weak; and its stomach on dissection contained small green caterpillars, and a few winged insects.

As this species is so very rare in the United States, it is most probably a native of a more southerly climate, where it may be equally numerous with any of the rest of its genus. The small Cerulean Warbler, (Plate XVII, fig. 5.) which in Pennsylvania, and almost all over the atlantic states, is extremely rare, I found the most numerous of its tribe in Tennessee and West Florida; and the Carolina Wren, (Plate XII, fig. 5.) which is also scarce to the northward of Maryland, is abundant through the whole extent of country from Pittsburgh to New Orleans.

Particular species of birds, like different nations of men, have their congenial climes and favourite countries; but wanderers are common to both; some in search of better fare; some of adventures; others led by curiosity; and many driven by storms and accident.

The Tennessee Warbler is four inches and three quarters long, and eight inches in extent; the back, rump and tail coverts, are

of a rich yellow olive; lesser wing coverts the same; wings deep dusky, edged broadly with yellow olive; tail forked, olive, relieved with dusky; cheeks and upper part of the head inclining to light bluish, and tinged with olive; line from the nostrils over the eye pale yellow, fading into white; throat and breast pale cream colour; belly and vent white; legs purplish brown; bill pointed and thicker at the base than those of the *Sylvia* genus generally are; upper mandible dark dusky, lower somewhat paler; eye hazel.

The female differs little, in the colour of her plumage, from the male; the yellow line over the eye is more obscure, and the olive not of so rich a tint.

SPECIES 25. SYLVIA FORMOSA.

KENTUCKY WARBLER.

[Plate XXV.—Fig. 3.]

PEALE'S *Museum*, No. 7786.

THIS new and beautiful species inhabits the country whose name it bears. It is also found generally in all the intermediate tracts between Nashville and New Orleans, and below that as far as the Balize, or mouths of the Mississippi, where I heard it several times, twittering among the high rank grass and low bushes of those solitary and desolate looking morasses. In Kentucky and Tennessee it is particularly numerous, frequenting low damp woods, and builds its nest in the middle of a thick tuft of rank grass, sometimes in the fork of a low bush, and sometimes on the ground; in all of which situations I have found it. The materials are loose dry grass, mixed with the light pith of weeds, and lined with hair. The female lays four, and sometimes six eggs, pure white, sprinkled with specks of reddish. I observed her sitting early in May. This species is seldom seen among the high branches; but loves to frequent low bushes and cane swamps, and is an active sprightly bird. Its notes are loud, and in threes, resembling, *tweedle, tweedle, tweedle*. It appears in Kentucky from the south about the middle of April; and leaves the territory of New Orleans on the approach of cold weather; at least I was assured that it does not remain there during the winter. It appeared to me to be a restless, fighting species; almost always engaged in pursuing some of its fellows; though this might have been occasioned by its numbers, and the particular season of spring, when love and jealousy rage with violence in the breasts of the feathered tenants of the grove; who

experience all the ardency of those passions no less than their lord and sovereign man.

The Kentucky Warbler is five inches and a half long, and eight inches in extent; the upper parts are an olive green; line over the eye and partly under it, and whole lower parts, rich brilliant yellow; head slightly crested, the crown deep black, towards the hind part spotted with light ash; lores, and spot curving down the neck, also black; tail nearly *even* at the end, and of a rich olive green; interior vanes of that and the wings dusky; legs an almost transparent pale flesh colour.

The female wants the black under the eye, and the greater part of that on the crown, having those parts yellowish. This bird is very abundant in the moist woods along the Tennessee and Cumberland rivers.

SPECIES 26. SYLVIA MINUTA.

PRAIRIE WARBLER.

[Plate XXV.—Fig. 4.]

PEALE'S *Museum*, No. 7784.

THIS pretty little species I first discovered in that singular tract of country in Kentucky, commonly called the Barrens. I shot several afterwards in the open woods of the Chactaw nation, where they were more numerous. They seem to prefer these open plains, and thinly wooded tracts; and have this singularity in their manners, that they are not easily alarmed; and search among the leaves the most leisurely of any of the tribe I have yet met with; seeming to examine every blade of grass, and every leaf; uttering at short intervals a feeble *chirr*. I have observed one of these birds to sit on the lower branch of a tree for half an hour at a time, and allow me to come up nearly to the foot of the tree, without seeming to be in the least disturbed, or to discontinue the regularity of its occasional note. In activity it is the reverse of the preceding species; and is rather a scarce bird in the countries where I found it. Its food consists principally of small caterpillars and winged insects.

The Prairie Warbler is four inches and a half long, and six inches and a half in extent; the upper parts are olive, spotted on the back with reddish chestnut; from the nostril over and under the eye, yellow; lores black; a broad streak of black also passes beneath the yellow under the eye; small pointed spots of black reach from a little below that along the side of the neck and under the wings; throat, breast and belly rich yellow; vent cream coloured, tinged with yellow; wings dark dusky olive; primaries and greater coverts edged and tipped with pale yellow; second row of coverts wholly yellow; lesser, olive; tail deep

brownish black, lighter on the edges, the three exterior feathers broadly spotted with white.

The female is destitute of the black mark under the eye; has a few slight touches of blackish along the sides of the neck; and some faint shades of brownish red on the back.

The nest of this species is of very neat and delicate workmanship, being pensile, and generally hung on the fork of a low bush or thicket; it is formed outwardly of green moss, intermixed with rotten bits of wood and caterpillars' silk; the inside is lined with extremely fine fibres of grape-vine bark; and the whole would scarcely weigh a quarter of an ounce. The eggs are white, with a few brown spots at the great end. These birds are migratory, departing for the south in October.

SPECIES 27. SYLVIA RARA.

BLUE-GREEN WARBLER.

[Plate XXVII.—Fig. 2.]

PEALE'S *Museum*, No. 7788.

THIS new species, the only one of its sort I have yet met with, was shot on the banks of Cumberland river, about the beginning of April; and the drawing made with care immediately after. Whether male or female I am uncertain. It is one of those birds that usually glean among the high branches of the tallest trees, which render it difficult to be procured. It was darting about with great nimbleness among the leaves, and appeared to have many of the habits of the Flycatcher. After several ineffectual excursions in search of another of the same kind, with which I might compare the present, I am obliged to introduce it with this brief account.

The specimen has been deposited in Mr. Peale's museum.

The Blue-green Warbler is four inches and a half long, and seven and a half in extent; the upper parts are verditer, tinged with pale green, brightest on the front and forehead; lores, line over the eye, throat, and whole lower parts very pale cream; cheeks slightly tinged with greenish; bill and legs bright light blue, except the upper mandible, which is dusky; tail forked, and, as well as the wings brownish black; the former marked on the three exterior vanes with white and edged with greenish; the latter having the first and second row of coverts tipped with white. Note a feeble chirp.

SPECIES 28. SYLVIA RUBRICAPILLA.

NASHVILLE WARBLER.

[Plate XXVII.— Fig. 3.]

PEALE'S *Museum*, No. 7789.

THE very uncommon notes of this little bird were familiar to me for several days before I succeeded in obtaining it. These notes very much resembled the breaking of small dry twigs, or the striking of small pebbles of different sizes smartly against each other for six or seven times, and loud enough to be heard at the distance of thirty or forty yards. It was some time before I could ascertain whether the sound proceeded from a bird or an insect. At length I discovered the bird; and was not a little gratified at finding it an entirely new and hitherto undescribed species. I was also fortunate enough to meet afterwards with two others exactly corresponding with the first, all of them being males. These were shot in the state of Tennessee, not far from Nashville. It had all the agility and active habits of its family the Worm-eaters.

The length of this species is four inches and a half, breadth seven inches; the upper parts of the head and neck light ash, a little inclining to olive; crown spotted with deep chestnut in small touches; a pale yellowish ring round the eye; whole lower parts vivid yellow, except the middle of the belly, which is white; back yellow olive, slightly skirted with ash; rump and tail coverts rich yellow olive; wings nearly black, broadly edged with olive; tail slightly forked and very dark olive; legs ash; feet dirty yellow; bill tapering to a fine point, and dusky ash; no white on wings or tail; eye hazel.

SPECIES 29. *SYLVIA PUSILLA*.

BLUE YELLOW-BACK WARBLER.

[Plate XXVIII.—Fig. 3.]

Parus Americanus, LINN. *Syst.* 341.—*Finch Creeper*, CATESB. I, 64.—LATHAM, II, 558.—*Creeping Titmouse*, Arct. Zool. 423, No. 326.—*Parus varius*, *Various coloured little Finch Creeper*, BARTRAM, p. 292.—PEALE'S *Museum*, No. 6910.*

NOTWITHSTANDING the respectability of the above authorities, I must continue to consider this bird as a species of Warbler. Its habits indeed partake something of the Titmouse; but the form of its bill is decisively that of the *Sylvia* genus. It is remarkable for frequenting the tops of the tallest trees, where it feeds on the small winged insects and caterpillars that infest the young leaves and blossoms. It has a few feeble chirruping notes, scarcely loud enough to be heard at the foot of the tree. It visits Pennsylvania from the south, early in May; is very abundant in the woods of Kentucky; and is also found in the northern parts of the state of New York. Its nest I have never yet met with.

This little species is four inches and a half long, and six inches and a half in breadth; the front, and between the bill and eyes, is black; the upper part of the head and neck a fine Prussian blue; upper part of the back brownish yellow, lower and rump pale blue; wings and tail black, the former crossed with two bars of white, and edged with blue; the latter marked on

* *Parus Americanus*, LINN. *Syst. Ed.* 10, I, p. 190.—GMEL. *Syst.* I, p. 1007.—LATH. *Ind. Orn.* II, p. 571.—*Motacilla americana*, GMEL. *Syst.* I, 960.—*Sylvia americana*, *Ind. Orn.* II, p. 520.—*Motacilla ludoviciana*, GMEL. *Syst.* I, p. 983.—*Sylvia ludoviciana*, LATH. *Ind. Orn.* II, p. 535.—*Figuier cendre de la Caroline*, BUFF. *Pl. Enl.* 731, f. 1.—*Sylvia torquata*, VIEILL. *Ois. de l'Am. Sept. pl.* 99.

the inner webs of the three exterior feathers with white, a circumstance common to a great number of the genus; immediately above and below the eye is a small touch of white; the upper mandible is black, the lower, as well as the whole throat and breast, rich yellow, deepening about its middle to orange red, and marked on the throat with a small crescent of black; on the edge of the breast is a slight touch of rufous; belly and vent white; legs dark brown; feet dirty yellow. The female wants both the black and orange on the throat and breast; the blue on the upper parts is also of a duller tint.

SPECIES 30. *SYLVIA PETECHIA*.

YELLOW RED-POLL WARBLER.

[Plate XXVIII.—Fig. 4.]

Red-headed Warbler, TURTON, I, 605.—PEALE'S *Museum*, No. 7124.*

THIS delicate little bird arrives in Pennsylvania early in April, while the maples are yet in blossom, among the branches of which it may generally be found feeding on the stamina of the flowers, and on small winged insects. Low swampy thickets are its favourite places of resort. It is not numerous, and its notes are undeserving the name of song. It remains with us all summer; but its nest has hitherto escaped me. It leaves us late in September. Some of them probably winter in Georgia, having myself shot several late in February, on the borders of the Savannah river.

Length of the yellow Red-poll five inches, extent eight; line over the eye, and whole lower parts, rich yellow; breast streaked with dull red; upper part of the head reddish chestnut, which it loses in winter; back yellow olive, streaked with dusky; rump and tail-coverts greenish yellow; wings deep blackish brown, exteriorly edged with olive; tail slightly forked, and of the same colour as the wings.

The female wants the red cap; and the yellow of the lower parts is less brilliant; the streaks of red on the breast are also fewer and less distinct.

* *Motacilla petechia*, LINN. *Syst.* I, p. 334.—GMEL. *Syst.* I, p. 983.—*Sylvia petechia*, LATH. *Ind. Orn.* II, p. 535.—VIEILL. *Ois. de l'Am. Sept. pl.* 91.—*Ficedula Pennsylvanica erythrocephalos*, BRISS. III, p. 488, 49.—*Figuier à tête rouge de Pennsylvanie*, BUFF. *Ois.* V, p. 286.—*Red-headed Warbler*, PENN. *Arct. Zool.* II, No. 289.—LATH. *Syn.* IV, p. 479, 39.

SPECIES 31. *SYLVIA STRIATA*.

BLACK-POLL WARBLER.

[Plate XXX.—Fig. 3, Male.]

LATH. II, p. 460.—*Arct. Zool.* p. 401, No. 290.—TURTON, 600.—
PEALE'S *Museum*, No. 7054.*

THIS species has considerable affinity to the Flycatchers in its habits. It is chiefly confined to the woods, and even there, to the tops of the tallest trees, where it is described skipping from branch to branch in pursuit of winged insects. Its note is a single *screeep*, scarcely audible from below. It arrives in Pennsylvania about the twentieth of April, and is first seen on the tops of the highest maples, darting about among the blossoms. As the woods thicken with leaves it may be found pretty generally, being none of the least numerous of our summer birds. It is, however, most partial to woods in the immediate neighbourhood of creeks, swamps, or morasses, probably from the greater number of its favourite insects frequenting such places. It is also pretty generally diffused over the United States, having myself met with it in most quarters of the Union; though its nest has hitherto defied all my researches.

This bird may be considered as occupying an intermediate station between the Flycatchers and the Warblers; having the manners of the former, and the bill, partially, of the latter. The nice gradations by which Nature passes from one species to another, even in this department of the great chain of beings, will forever baffle all the artificial rules and systems of man. And this truth every fresh discovery must impress more forc-

* *Motacilla striata*, GMEI. *Syst.* I, p. 976.—*Sylvia striata*, LATH. *Ind. Orn.* II, p. 527.

bly on the mind of the observing naturalist. These birds leave us early in September.

The Black-poll Warbler is five and a half inches long, and eight and a half in extent; crown and hind head black; cheeks pure white; from each lower mandible runs a streak of small black spots, those on the side larger; the rest of the lower parts white; primaries black, edged with yellow; rest of the wing black, edged with ash; the first and second row of coverts broadly tipped with white; back ash, tinged with yellow ochre, and streaked laterally with black; tail black, edged with ash, the three exterior feathers marked on the inner webs with white; bill black above, whitish below, furnished with bristles at the base; iris hazel; legs and feet reddish yellow.

The female differs very little in plumage from the male.

SYLVIA STRIATA.

BLACK-POLL WARBLER.

[Plate LIV.—Fig. 4, Female.]

THIS bird was shot in the same excursion with the Cape May Warbler (*Sylvia maritima*), and its history as far as it is known, will be detailed in the history of that species. See page 394. Of its nest and eggs I am ignorant. It doubtless breeds both here and in New Jersey, having myself found it in both places during the summer. From its habit of keeping on the highest branches of trees it probably builds in such situations, and its nest may long remain unknown to us.

Pennant, who describes this species, says that it inhabits during summer Newfoundland and New York, and is called in the last *Sailor*. This name, for which however no reason is given, must be very local, as the bird itself is one of those silent, shy and solitary individuals that seek the deep retreats of the forest, and are known to few or none but the naturalist.

Length of the female Black-cap five inches and a quarter, extent eight and a quarter; bill brownish black; crown yellow olive streaked with black; back the same, mixed with some pale slate; wings dusky brown, edged with olive; first and second wing coverts tipped with white; tertials edged with yellowish white; tail coverts pale gray; tail dusky, forked, the two exterior feathers marked on their inner vanes with a spot of white; round the eye is a whitish ring; cheeks and sides of the breast tinged with yellow, and slightly spotted with black; chin white, as are also the belly and vent; legs and feet dirty orange.

The young bird of the first season, and the female, as is usually the case, are very much alike in plumage. On their arrival

early in April, the black feathers on the crown are frequently seen coming out, intermixed with the former ash-coloured ones.

This species has all the agility and many of the habits of the Flycatcher.

SPECIES 32. SYLVIA AGILIS.

CONNECTICUT WARBLER.

[Plate XXXIX.—Fig. 4.]

THIS is a new species, first discovered in the state of Connecticut, and twice since met with in the neighbourhood of Philadelphia. As to its notes or nest, I am altogether unacquainted with them. The different specimens I have shot corresponded very nearly in their markings; two of these were males, and the other undetermined, but conjectured also to be a male. It was found in every case among low thickets, but seemed more than commonly active, not remaining for a moment in the same position. In some of my future rambles I may learn more of this solitary species.

Length five inches and three quarters, extent eight inches; whole upper parts a rich yellow olive; wings dusky brown, edged with olive; throat dirty white, or pale ash; upper part of the breast dull greenish yellow; rest of the lower parts a pure rich yellow; legs long, slender, and of a pale flesh colour; round the eye a narrow ring of yellowish white; upper mandible pale brown, lower whitish; eye dark hazel.

Since writing the above I have shot two specimens of a bird which in every particular agrees with the above, except in having the throat of a dull buff colour instead of pale ash; both of these were females, and I have little doubt but they are of the same species with the present, as their peculiar activity seemed exactly similar to the males above described.

These birds do not breed in the lower parts of Pennsylvania, though they probably may be found in summer in the alpine swamps and northern regions, in company with a numerous class of the same tribe that breed in these unfrequented solitudes.

SPECIES 33. SYLVIA LEUCOPTERA.*

PINE-SWAMP WARBLER.

[Plate XLIII.—Fig. 4.]

THIS little bird is for the first time figured or described. Its favourite haunts are in the deepest and gloomiest pine and hemlock swamps of our mountainous regions, where every tree, trunk, and fallen log is covered with a luxuriant coat of moss, that even mantles over the surface of the ground, and prevents the sportsman from avoiding a thousand holes, springs and swamps, into which he is incessantly plunged. Of the nest of this bird I am unable to speak. I found it associated with the Blackburnian Warbler, the Golden-crested Wren, Ruby-crowned Wren, Yellow Rump, and others of that description, in such places as I have described, about the middle of May. It seemed as active in flycatching as in searching for other insects, darting nimbly about among the branches, and flirting its wings; but I could not perceive that it had either note or song. I shot three, one male and two females. I have no doubt that they breed in those solitary swamps, as well as many other of their associates.

The Pine-swamp Warbler is four inches and a quarter long, and seven inches and a quarter in extent; bill black, not notched, but furnished with bristles; upper parts a deep green olive, with slight bluish reflections, particularly on the edges of the tail and on the head; wings dusky, but so broadly edged with olive green as to appear wholly of that tint; immediately below the primary coverts there is a single triangular spot of yellowish white; no other part of the wing is white; the three exterior tail

* Wilson first called this bird *pusilla*, but that name being preoccupied, he changed it in the index to *leucoptera*; this latter name is also preoccupied, and Prince Musignano has proposed that it should be called *S. sphagnosa*.

feathers with a spot of white on their inner vanes; the tail is slightly forked; from the nostrils over the eye extends a fine line of white, and the lower eye-lid is touched with the same tint; lores blackish; sides of the neck and auriculars green olive; whole lower parts pale yellow ochre, with a tinge of greenish, duskiest on the throat; legs long and flesh coloured.

The plumage of the female differs in nothing from that of the male.

*SPECIES 34. SYLVIA MONTANA.**

BLUE-MOUNTAIN WARBLER.

[Plate XLIV.—Fig. 2. Male.]

THIS new species was first discovered near that celebrated ridge, or range of mountains, with whose name I have honoured it. Several of these solitary Warblers remain yet to be gleaned up from the airy heights of our alpine scenery, as well as from the recesses of our swamps and morasses, whither it is my design to pursue them by every opportunity. Some of these I believe rarely or never visit the lower cultivated parts of the country; but seem only at home among the glooms and silence of those dreary solitudes. The present species seems of that family, or subdivision of the Warblers, that approach the Flycatcher, darting after flies wherever they see them, and also searching with great activity among the leaves. Its song was a feeble screech, three or four times repeated.

This species is four inches and three quarters in length; the upper parts a rich yellow olive; front, cheeks and chin yellow, also the sides of the neck; breast and belly pale yellow, streaked with black or dusky; vent plain pale yellow; wings black, first and second row of coverts broadly tipped with pale yellowish white; tertials the same; the rest of the quills edged with whitish; tail black, handsomely rounded, edged with pale olive; the two exterior feathers, on each side, white on the inner vanes

* Prince Musignano in his Synopsis of the Birds of the United States, see Ann. Lyc. Nat. Hist. N. Y. considers this as the *Motacilla tigrina*, Gmel. Syst. I, p. 985. If this be correct the following synonyms may be quoted:—*Sylvia tigrina*, LATH. Ind. Orn. II, p. 537.—VIEILL. Ois. de l'Am. Sept. pl. 94.—*Ficedula Canadensis fusca*, BRISS. III, p. 515, 63, t. 27, f. 4.—Id. 8vo. I, p. 451.—*Le Figuier tacheté de jaune*, BUFF. V, p. 293.—*Spotted yellow Flycatcher*, Arct. Zool. II, No. 302.—EDW. pl. 257.—LATH. Syn. IV, p. 482, 106.

from the middle to the tips, and edged on the outer side with white; bill dark brown; legs and feet purple brown; soles yellow; eye dark hazel.

This was a male. The female I have never seen.

SPECIES 35. SYLVIA PARUS.

HEMLOCK WARBLER.

[Plate XLIV.—Fig. 3.]

THIS is another nondescript, first met with in the Great Pine swamp, Pennsylvania. From observing it almost always among the branches of the hemlock trees, I have designated it by that appellation, the markings of its plumage not affording me a peculiarity sufficient for a specific name. It is a most lively and active little bird, climbing among the twigs, and hanging like a Titmouse on the branches; but possessing all the external characters of the Warblers. It has a few low and very sweet notes, at which times it stops and repeats them for a short time, then darts about as before. It shoots after flies to a considerable distance; often begins at the lower branches, and hunts with great regularity and admirable dexterity, upwards to the top, then flies off to the next tree, at the lower branches of which it commences hunting upwards as before.

This species is five inches and a half long, and eight inches in extent; bill black above, pale below; upper parts of the plumage black, thinly streaked with yellow olive; head above yellow, dotted with black; line from the nostril over the eye, sides of the neck and whole breast rich yellow; belly paler, streaked with dusky; round the breast some small streaks of blackish; wing black, the greater coverts and next superior row broadly tipped with white, forming two broad bars across the wing; primaries edged with olive, tertials with white; tail coverts black, tipped with olive; tail slightly forked, black, and edged with olive; the three exterior feathers altogether white on their inner vanes; legs and feet dirty yellow; eye dark hazel; a few bristles at the mouth; bill not notched.

This was a male. Of the female I can at present give no account.

SPECIES 36. SYLVIA MARITIMA.

CAPE-MAY WARBLER.

[Plate LIV.—Fig. 3, Male.]

THIS new and beautiful little species was discovered in a maple swamp, in Cape May county, not far from the coast, by Mr. George Ord of this city, who accompanied me on a shooting excursion to that quarter in the month of May last. Through the zeal and activity of this gentleman I succeeded in procuring many rare and elegant birds among the sea islands and extensive salt marshes that border that part of the Atlantic; and much interesting information relative to their nests, eggs, and particular habits. I have also at various times been favoured with specimens of other birds from the same friend, for all which I return my grateful acknowledgments.

The same swamp that furnished us with this elegant little stranger, and indeed several miles around it, were ransacked by us both, for another specimen of the same; but without success. Fortunately it proved to be a male, and being in excellent plumage, enabled me to preserve a faithful portrait of the original.

Whether this be a summer resident in the lower parts of New Jersey, or merely a transient passenger to a more northern climate, I cannot with certainty determine. The spring had been remarkably cold, with long and violent north-east storms, and many winter birds, as well as passengers from the south, still lingered in the woods as late as the twentieth of May, gleaning, in small companies, among the opening buds and infant leaves, and skipping nimbly from twig to twig, which was the case with the bird now before us when it was first observed. Of its notes, or particular history, I am equally unformed.

The length of this species is five inches and a half, extent eight and a half; bill and legs black; whole upper part of the head deep black; line from the nostril over the eye, chin and sides of the neck rich yellow; ear feathers orange, which also tints the back part of the yellow line over the eye; at the anterior and posterior angle of the eye is a small touch of black; hind head and whole back, rump and tail coverts yellow olive, thickly streaked with black; the upper exterior edges of several of the greater wing coverts are pure white, forming a broad bar on the wing, the next superior row being also broadly tipped with white; rest of the wing dusky, finely edged with dark olive yellow; throat and whole breast rich yellow, spreading also along the sides under the wings, handsomely marked with spots of black running in chains; belly and vent yellowish white; tail forked, dusky black, edged with yellow olive, the three exterior feathers on each side marked on their inner vanes with a spot of white. The yellow on the throat and sides of the neck reaches nearly round it, and is very bright.

GENUS 44. PIPRA. MANAKIN.

SPECIES. PIPRA POLYGLOTTA.

YELLOW-BREASTED CHAT.

[Plate VI.—Fig. 2.]

Muscicapa viridis, GMEL. *Syst.* I, 936.—*Le Merle vert de la Caroline*, BUFFON, III, 396.—*Chattering Flycatcher*, *Arct. Zool.* II, No. 266.—*LATH. Syn.* III, 350, 48.—*Garrulus Australis*, BARTRAM, 290.—*PEALE'S Museum*, No. 6661.*

THIS is a very singular bird. In its voice and manners, and the habit it has of keeping concealed, while shifting and vociferating around you, it differs from most other birds with which I am acquainted; and has considerable claims to originality of character. It arrives in Pennsylvania about the first week in May, and returns to the south again as soon as its young are able for the journey, which is usually about the middle of August; its term of residence here being scarcely four months. The males generally arrive several days before the females, a circumstance common with many other of our birds of passage.

When he has once taken up his residence in a favourite situation, which is almost always in close thickets of hazel, brambles, vines, and thick underwood, he becomes very jealous of his possessions, and seems offended at the least intrusion; scolding every passenger as soon as they come within view, in a great variety of odd and uncouth monosyllables, which it is difficult to describe, but which may be readily imitated so as to deceive the bird himself, and draw him after you for half a quarter of a mile at a time, as I have sometimes amused myself in doing, and frequently without once seeing him. On these occasions

* *Ictera dumicola*, VIEILL. *Ois. de l'Am. Sept.* pl. 55.

his responses are constant and rapid, strongly expressive of anger and anxiety; and while the bird itself remains unseen, the voice shifts from place to place, among the bushes, as if it proceeded from a spirit. First are heard a repetition of short notes, resembling the whistling of the wings of a duck or teal, beginning loud and rapid, and falling lower and slower till they end in detached notes; then a succession of others, something like the barking of young puppies, is followed by a variety of hollow guttural sounds, each eight or ten times repeated, more like those proceeding from the throat of a quadruped than that of a bird; which are succeeded by others not unlike the mewing of a cat, but considerably hoarser. All these are uttered with great vehemence, in such different keys, and with such peculiar modulations of voice, as sometimes to seem at a considerable distance and instantly as if just beside you; now on this hand, now on that; so that from these manœuvres of ventriloquism you are utterly at a loss to ascertain from what particular spot or quarter they proceed. If the weather be mild and serene, with clear moonlight, he continues gabbling in the same strange dialect, with very little intermission, during the whole night, as if disputing with his own echoes; but probably with a design of inviting the passing females to his retreat; for when the season is farther advanced they are seldom heard during the night.

About the middle of May they begin to build. Their nest is usually fixed in the upper part of a bramble bush, in an almost impenetrable thicket; sometimes in a thick vine or small cedar; seldom more than four or five feet from the ground. It is composed outwardly of dry leaves, within these are laid thin strips of the bark of grape-vines, and the inside is lined with fibrous roots of plants, and fine dry grass. The female lays four eggs, slightly flesh coloured, and speckled all over with spots of brown or dull red. The young are hatched in twelve days; and make their first excursion from the nest about the second week in June. A friend of mine, an amateur in Canary birds, placed one of the Chat's eggs under a hen Canary, who brought it out; but it died on the second day; though she was so solicitous to feed

and preserve it, that her own eggs, which required two days more sitting, were lost through her attention to this.

While the female of the Chat is sitting, the cries of the male are still more loud and incessant. When once aware that you have seen him he is less solicitous to conceal himself; and will sometimes mount up into the air, almost perpendicularly to the height of thirty or forty feet, with his legs hanging; descending, as he rose, by repeated jerks, as if highly irritated, or as is vulgarly said "dancing mad." All this noise and gesticulation we must attribute to his extreme affection for his mate and young; and when we consider the great distance which in all probability he comes, the few young produced at a time, and that seldom more than once in the season, we can see the wisdom of providence very manifestly in the ardency of his passions.

Catesby seems to have first figured the yellow-breasted Chat; and the singularity of its manners has not escaped him. After repeated attempts to shoot one of them, he found himself completely baffled; and was obliged, as he himself informs us, to employ an Indian for that purpose, who did not succeed without exercising all his ingenuity. Catesby also observed its dancing manœuvres, and supposed that it always flew with its legs extended; but it is only in these paroxysms of rage and anxiety that this is done, as I have particularly observed.

The food of these birds consists chiefly of large black beetles, and other coleopterous insects; I have also found whortle-berries frequently in their stomach, in great quantities; as well as several other sorts of berries. They are very numerous in the neighbourhood of Philadelphia, particularly on the borders of rivulets, and other watery situations, in hedges, thickets, &c. but are seldom seen in the forest, even where there is underwood. Catesby indeed asserts, that they are only found on the banks of large rivers, two or three hundred miles from the sea; but though this may be the case in South Carolina, yet in Maryland and New Jersey, and also in New York, I have met with these birds within two hours' walk of the sea, and in some places within less than a mile of the shore. I have not been able to trace him to any of the West India islands; though they cer-

tainly retire to Mexico, Guiana, and Brazil, having myself seen skins of these birds in the possession of a French gentleman, which were brought from the two latter countries.

By recurring to the synonymes at the beginning of this article, it will be perceived how much European naturalists have differed in classing this bird. That the judicious Pennant, Gmelin, and even Dr. Latham, however, should have arranged it with the Flycatchers, is certainly very extraordinary; as neither in the particular structure of its bill, tongue, feet, nor in its food or manners, has it any affinity whatever to that genus. Some other ornithologists have removed it to the Tanagers; but the bill of the Chat, when compared with that of the Summer Red-bird in the same plate, bespeaks it at once to be of a different tribe. Besides, the Tanagers seldom lay more than two or three eggs—the Chat usually four; the former build on trees; the latter in low thickets. In short, though this bird will not exactly correspond with any known genus, yet the form of its bill, its food, and many of its habits, would almost justify us in classing it with the genus *Pipra* (Manakin), to which family it seems most nearly related.

The yellow-breasted Chat is seven inches long, and nine inches in extent; the whole upper parts are of a rich and deep olive green, except the tips of the wings, and interior vanes of the wing and tail feathers, which are dusky brown; the whole throat and breast is of a most brilliant yellow, which also lines the inside of the wings, and spreads on the sides immediately below; the belly and vent are white; the front slate-coloured, or dull cinereous; lores black; from the nostril a line of white extends to the upper part of the eye, which it nearly encircles; another spot of white is placed at the base of the lower mandible; the bill is strong, slightly curved, sharply ridged on the top, compressed, over-hanging a little at the tip, not notched, pointed, and altogether black; the tongue is tapering, more fleshy than those of the *Muscicapa* tribe, and a little lacerated at the tip; the nostril is oval, and half covered with an arching

membrane; legs and feet light blue, hind claw rather the strongest, the two exterior toes united to the second joint.

The female may be distinguished from the male by the black and white adjoining the eye being less intense or pure than in the male; and in having the inside of the mouth of a dirty flesh colour, which in the male is black; in other respects their plumage is nearly alike.

GENUS 45. PARUS. TITMOUSE.

SPECIES 1. *P. ATRICAPILLUS*.

BLACK-CAPT TITMOUSE.

[Plate VIII.—Fig. 4.]

Parus atricapillus, LINN. *Syst.* 1, 341, 6.—GMEL. *Syst.* 1, 1008.—
La Mesange a tete noire de Canada, BUFFON, v, 408.—*Canada Titmouse*, *Arct. Zool.* 11, No. 328.—LATH. *Syn.* 1v, 542, 9.—
PEALE'S *Museum*, No. 7380.

THIS is one of our resident birds, active, noisy and restless, hardy beyond any of his size, braving the severest cold of our continent as far north as the country round Hudson's Bay, and always appearing most lively in the coldest weather. The males have a variety of very sprightly notes, which cannot indeed be called a song, but rather a lively, frequently repeated, and often varied twitter. They are most usually seen during the fall and winter, when they leave the depth of the woods, and approach nearer to the scenes of cultivation. At such seasons they abound among evergreens, feeding on the seeds of the pine tree; they are also fond of sun-flower seeds, and associate in parties of six, eight, or more, attended by the two species of Nuthatch already described, the Crested Titmouse, Brown Creeper, and small Spotted Woodpecker; the whole forming a very nimble and restless company, whose food, manners and dispositions are pretty much alike. About the middle of April they begin to build, choosing the deserted hole of a squirrel or Woodpecker, and sometimes with incredible labour digging out one for themselves. The female lays six white eggs, marked with minute specks of red; the first brood appears about the beginning of June, and the second towards the end of July; the whole of

the family continue to associate together during winter. They traverse the woods in regular progression from tree to tree, tumbling, chattering and hanging from the extremities of the branches, examining about the roots of the leaves, buds, and crevices of the bark for insects and their larvæ. They also frequently visit the orchards, particularly in fall, the sides of the barn and barn-yard in the same pursuit, trees in such situations being generally much infested with insects. We therefore with pleasure rank this little bird among the farmer's friends, and trust our rural citizens will always recognize him as such.

This species has a very extensive range; it has been found on the western coast of America, as far north as lat. 62°; it is common at Hudson's bay, and most plentiful there during winter, as it then approaches the settlements in quest of food. Protected by a remarkably thick covering of long soft downy plumage, it braves the severest cold of those northern regions.

The Black-capt Titmouse is five inches and a half in length, and six and a half in extent; throat and whole upper part of the head and ridge of the neck black; between these lines a triangular patch of white ending at the nostril; bill black and short, tongue truncate; rest of the upper parts lead coloured or cinereous, slightly tinged with brown, wings edged with white; breast, belly and vent yellowish white; legs light blue; eyes dark hazel. The male and female are nearly alike. The figure in the plate renders any further description unnecessary.

The upper parts of the head of the young are for some time of a dirty brownish tinge; and in this state they agree so exactly with the *Parus Hudsonicus*,* described by Latham, as to afford good grounds for suspecting them to be the same.

These birds sometimes fight violently with each other, and are known to attack young and sickly birds that are incapable of resistance, always directing their blows against the scull. Being in the woods one day, I followed a bird for some time, the singularity of whose notes surprised me. Having shot him from

* Hudson Bay Titmouse, Synopsis, II, 557.

off the top of a very tall tree, I found it to be the Black-headed Titmouse, with a long and deep indentation in the cranium, the skull having been evidently at some former time drove in, and fractured, but was now perfectly healed. Whether or not the change of voice could be owing to this circumstance I cannot pretend to decide.

SPECIES 2. *PARUS BICOLOR.*

CRESTED TITMOUSE.

[Plate VIII.—Fig. 5.]

Parus bicolor, LINN. *Syst.* 1, 544, 1.—*La Mesange huppee de la Caroline*, BUFF. v, 451.—*Toupet Titmouse*, *Arct. Zool.* 1, No. 324.—LATH. *Syn.* IV, 544, 11.—PEALE'S *Museum*, No. 7364.

THIS is another associate of the preceding species; but more noisy, more musical, and more suspicious, though rather less active. It is, nevertheless, a sprightly bird, possessing a remarkable variety in the tones of its voice, at one time not much louder than the squeaking of a mouse, and in a moment after whistling aloud, and clearly, as if calling a dog; and continuing this dog-call through the woods for half an hour at a time. Its high, pointed crest, or as Pennant calls it, *toupet*, gives it a smart and not inelegant appearance. Its food corresponds with that of the foregoing; it possesses considerable strength in the muscles of its neck, and is almost perpetually digging into acorns, nuts, crevices, and rotten parts of the bark, after the larvæ of insects. It is also a constant resident here. When shot at and wounded, it fights with great spirit. When confined to a cage it soon becomes familiar, and will subsist on hemp-seed, cherry-stones, apple seeds, and hickory nuts, broken and thrown into it. However, if the cage be made of willows, and the bird not much hurt, he will soon make his way through them. The great concavity of the lower side of the wings and tail of this genus of birds, is a strong characteristic, and well suited to their short irregular flight.

This species is also found over the whole United States; but is most numerous towards the north. It extends also to Hudson's bay; and, according to Latham, is found in Denmark, and in

the southern parts of Greenland, where it is called *Avingarsak*. If so, it probably inhabits the continent of North America, from sea to sea.

The Crested Titmouse is six inches long, and seven inches and a half in extent; the whole upper parts a dull cinereous, or lead colour, except the front, which is black, tinged with reddish; whole lower parts dirty white, except the sides under the wings, which are reddish orange; legs and feet light blue; bill black, short and pretty strong; wing feathers relieved with dusky on their inner vanes; eye dark hazel; lores white; the head elegantly ornamented with a high, pointed, almost upright crest; tail a little forked, considerably concave below, and of the same colour above as the back; tips of the wings dusky; tongue very short, truncate, and ending in three or four sharp points. The female cannot be distinguished from the male by her plumage, unless in its being something duller, for both are equally marked with reddish orange on the sides under the wings, which some foreigners have made the distinguishing mark of the male alone.

The nest is built in a hollow tree, the cavity often dug by itself; the female begins to lay early in May; the eggs are usually six, pure white, with a few very small specks of red near the great end. The whole family, in the month of July, hunt together, the parents keeping up a continual chatter, as if haranguing and directing their inexperienced brood.

GENUS 46. HIRUNDO. SWALLOW.

SPECIES 1. *H. PURPUREA*.

PURPLE MARTIN.

[Plate XXXIX.—Fig. 1, *Male*.—Fig. 2, *Female*.]

LATH. *Syn.* IV, p. 574, 21. *Ibid.* IV, p. 575, 23.—CATESB. *Car.* I, 51.
—*Arct. Zool.* II, No. 333.—*Hirondelle bleue de la Caroline*,
BUFF. VI, p. 674. *Pl. Enl.* 722.—*Le Martinet couleur de pourpre*,
BUFF. VI, p. 676.—TURT. *Syst.* 629.—EDW. 120.—*Hirundo*
subis, LATH. IV, p. 575—24.—PEALE'S *Museum*, No. 7645,
7646.*

THIS well known bird is a general inhabitant of the United States, and a particular favourite wherever he takes up his abode. I never met with more than one man who disliked the Martins and would not permit them to settle about his house. This was a penurious close-fisted German, who hated them because, as he said, “they eat his *peas*.” I told him he must certainly be mistaken, as I never knew an instance of Martins eating *peas*; but he replied with coolness that he had many times seen them himself “blaying near the hife, and going *schnip, schnap*,” by which I understood that it was his *bees* that had been the sufferers; and the charge could not be denied.

This sociable and half domesticated bird arrives in the southern frontiers of the United States late in February or early in March; reaches Pennsylvania about the first of April, and extends his migrations as far north as the country round Hudson's Bay, where he is first seen in May, and disappears in August;

* We add the following synonyms:—*Hirundo purpurea*, LINN. *Syst.* I, p. 344.
—GMEL. *Syst.* I, p. 1020.—*Hirundo cærulea*, VIEILL. *Ois. de l'Am.* Sept. pl. 25,
male; pl. 27, female.

so, according to the doctrine of torpidity, has consequently a pretty long annual nap in those frozen regions, of eight or nine months, under the ice! We, however, choose to consider him as advancing northerly with the gradual approach of spring, and retiring with his young family, on the first decline of summer, to a more congenial climate.

The summer residence of this agreeable bird is universally among the habitations of man; who, having no interest in his destruction, and deriving considerable advantage as well as amusement from his company, is generally his friend and protector. Wherever he comes, he finds some hospitable retreat fitted up for his accommodation and that of his young, either in the projecting wooden cornice—on the top of the roof, or sign post—in the box appropriated to the Blue-bird; or, if all these be wanting, in the dove-house among the pigeons. In this last case, he sometimes takes possession of one quarter or tier of the premises, in which not a pigeon dare for a moment set its foot. Some people have large conveniences formed for the Martins, with many apartments, which are usually fully tenanted, and occupied regularly every spring; and in such places, particular individuals have been noted to return to the same box for several successive years. Even the solitary Indian seems to have a particular respect for this bird. The Chactaws and Chickasaws cut off all the top branches from a sapling near their cabins, leaving the prongs a foot or two in length, on each of which they hang a gourd, or calabash, properly hollowed out for their convenience. On the banks of the Mississippi the negroes stick up long canes, with the same species of apartment fixed to their tops, in which the Martins regularly breed. Wherever I have travelled in this country I have seen with pleasure the hospitality of the inhabitants to this favourite bird.

As superseding the necessity of many of my own observations on this species, I beg leave to introduce in this place an extract of a letter from the late learned and venerable John Joseph Henry, esq. judge of the supreme court of Pennsylvania, a man of most amiable manners, which was written to me but a

few months before his death, and with which I am happy to honour my performance. — “The history of the Purple Martin of America,” says he, “which is indigenous in Pennsylvania and countries very far north of our latitude, will, under your control, become extremely interesting. We know its manners, habitudes, and useful qualities here; but we are not generally acquainted with some traits in its character, which in my mind rank it in the class of the most remarkable birds of passage. Somewhere (I cannot now refer to book and page) in Anson’s Voyage, or in Dampier, or some other southern voyager, I recollect that the Martin is named as an inhabitant of the regions of southern America, particularly of Chili; and in consequence from the knowledge we have of its immense emigration northward in our own country, we may fairly presume that its flight extends to the south as far as Terra del Fuego. If the conjecture be well founded, we may with some certainty place this useful and delightful companion and friend of the human race as the first in the order of birds of passage. Nature has furnished it with a lengthy, strong, and nervous pinion; its legs are short too, as not to impede its passage; the head and body are flattish; in short, it has every indication from bodily formation that Providence intended it as a bird of the longest flight. Belknap speaks of it as a visitant of New Hampshire. I have seen it in great numbers at Quebec. Hearne speaks of it in lat. 60° North. To ascertain the times of the coming of the Martin to New Orleans, and its migration to and from Mexico, Quito and Chili, are desirable data in the history of this bird; but it is probable that the state of science in those countries render this wish hopeless.

“Relative to the domestic history, if it may be so called, of the Blue-bird (of which you have given so correct and charming a description) and the Martin, permit me to give you an anecdote. In 1800 I removed from Lancaster to a farm a few miles above Harrisburgh. Knowing the benefit derivable to a farmer from the neighbourhood of the Martin in preventing the depredations of the Bald Eagle, the Hawks and even the Crows,

my carpenter was employed to form a large box with a number of apartments for the Martin. The box was put up in the autumn. Near and around the house were a number of well grown apple trees and much shrubbery, a very fit haunt for the feathered race. About the middle of February the Blue-birds came; in a short time they were very familiar, and took possession of the box: these consisted of two or three pairs. By the fifteenth of May the Blue-birds had eggs, if not young. Now the Martins arrived in numbers, visited the box, and a severe conflict ensued. The Blue-birds seemingly animated by their right of possession, or for the protection of their young, were victorious. The Martins regularly arrived about the middle of May for the eight following years, examined the apartments of the box in the absence of the Blue-birds, but were uniformly compelled to fly upon the return of the latter.

“The trouble caused you by reading this note you will be pleased to charge to the Martin. A box replete with that beautiful traveller, is not very distant from my bed head. Their notes seem discordant because of their numbers; yet to me they are pleasing. The industrious farmer and mechanic would do well to have a box fixed near the apartments of their drowsy labourers. Just as the dawn approaches, the Martin begins its notes, which last half a minute or more; and then subside until the twilight is fairly broken. An animated and incessant musical chattering now ensues, sufficient to arouse the most sleepy person. Perhaps chanticleer is not their superior in this beneficial qualification; and he is far beneath the Martin in his powers of annoying birds of prey.”

I shall add a few particulars to this faithful and interesting sketch by my deceased friend. About the middle or twentieth of April the Martins first begin to prepare their nest. The last of these which I examined was formed of dry leaves of the weeping willow, slender straws, hay and feathers, in considerable quantity. The eggs were four, very small for the size of the bird, and pure white without any spots. The first brood appears in May, the second late in July. During the period in which

the female is laying, and before she commences incubation, they are both from home the greater part of the day. When the female is sitting she is frequently visited by the male, who also occupies her place while she takes a short recreation abroad. He also often passes a quarter of an hour in the apartment beside her, and has become quite domesticated since her confinement. He sits on the outside dressing and arranging his plumage, occasionally passing to the door of the apartment as if to inquire how she does. His notes at this time seem to have assumed a peculiar softness, and his gratulations are expressive of much tenderness. Conjugal fidelity, even where there is a number together, seems to be faithfully preserved by these birds. On the twenty-fifth of May a male and female Martin took possession of a box in Mr. Bartram's garden. A day or two after, a second female made her appearance, and staid for several days; but from the cold reception she met with, being frequently beat off by the male, she finally abandoned the place, and set off, no doubt to seek for a more sociable companion.

The Purple Martin, like his half-cousin the King-bird, is the terror of Crows, Hawks, and Eagles. These he attacks whenever they make their appearance, and with such vigour and rapidity, that they instantly have recourse to flight. So well known is this to the lesser birds and to the domestic poultry, that as soon as they hear the Martin's voice, engaged in fight, all is alarm and consternation. To observe with what spirit and audacity this bird dives and sweeps upon and around the Hawk or the Eagle is astonishing. He also bestows an occasional bastinading on the King-bird when he finds him too near his premises; though he will at any time instantly cooperate with him in attacking the common enemy.

The Martin differs from all the rest of our swallows in the particular prey which he selects. Wasps, bees, large beetles, particularly those called by the boys *goldsmiths*, seem his favourite game. I have taken four of these large beetles from the stomach of a Purple Martin, each of which seemed entire and even unbruised.

The flight of the Purple Martin unites in it all the swiftness, ease, rapidity of turning and gracefulness of motion of its tribe. Like the Swift of Europe, he sails much with little action of the wings. He passes through the most crowded parts of our streets, eluding the passengers with the quickness of thought; or plays among the clouds, gliding about at a vast height, like an aerial being. His usual note *peuo peuo peuo*, is loud and musical; but is frequently succeeded by others more low and guttural. Soon after the twentieth of August he leaves Pennsylvania for the south.

This bird has been described three or four different times by European writers, as so many different species. The Canadian Swallow of Turton, and the great American Martin of Edwards, being evidently the female of the present species. The Violet Swallow of the former author, said to inhabit Louisiana, differs in no respect from the present. Deceived by the appearance of the flight of this bird, and its similarity to that of the Swift of Europe, strangers from that country have also asserted that the Swift is common to North America and the United States. No such bird, however, inhabits any part of this continent that I have as yet visited.

The Purple Martin is eight inches in length, and sixteen inches in extent; except the lores, which are black, and the wings and tail, which are of a brownish black, he is of a rich and deep purplish blue, with strong violet reflections; the bill is strong, the gap very large; the legs also short, stout, and of a dark dirty purple; the tail consists of twelve feathers, is considerably forked and edged with purple blue, the eye full and dark.

The female (fig. 2,) measures nearly as large as the male; the upper parts are blackish brown, with blue and violet reflections thinly scattered; chin and breast grayish brown; sides under the wings darker; belly and vent whitish, not pure, with stains of dusky and yellow ochre; wings and tail blackish brown.

SPECIES 2. HIRUNDO AMERICANA.

BARN SWALLOW.

[Plate XXXVIII.—Fig. 1, *Male*.—Fig. 2, *Female*.]

PEALE'S *Museum*, No. 7609.

THERE are but few persons in the United States unacquainted with this gay, innocent, and active little bird. Indeed the whole tribe are so distinguished from the rest of small birds by their sweeping rapidity of flight, their peculiar aerial evolutions of wing over our fields and rivers, and through our very streets, from morning to night, that the light of heaven itself, the sky, the trees, or any other common objects of nature, are not better known than the Swallows. We welcome their first appearance with delight, as the faithful harbingers and companions of flowery spring, and ruddy summer; and when, after a long, frost-bound and boisterous winter, we hear it announced, that "*The Swallows are come*," what a train of charming ideas are associated with the simple tidings!

The wonderful activity displayed by these birds forms a striking contrast to the slow habits of most other animals. It may be fairly questioned whether among the whole feathered tribes which heaven has formed to adorn this part of creation, there be any that, in the same space of time, pass over an equal extent of surface with the Swallow. Let a person take his stand on a fine summer evening by a new mown field, meadow or river shore for a short time, and among the numerous individuals of this tribe that flit before him fix his eye on a particular one, and follow, for a while, all its circuitous labyrinths—its extensive sweeps—its sudden, rapidly reiterated zig-zag excursions, little inferior to the lightning itself, and then attempt by the powers of mathematics to calculate the length of the various

lines it describes. Alas! even his omnipotent fluxions would avail him little here, and he would soon abandon the task in despair. Yet, that some definite conception may be formed of this extent, let us suppose, that this little bird flies, in his usual way, at the rate of one mile in a minute, which, from the many experiments I have made, I believe to be within the truth; and that he is so engaged for ten hours every day; and further, that this active life is extended to ten years (many of our small birds being known to live much longer even in a state of domestication), the amount of all these, allowing three hundred and sixty-five days to a year, would give us two millions one hundred and ninety thousand miles; upwards of eighty-seven times the circumference of the globe! Yet this little *winged seraph*, if I may so speak, who, in a few days, and at will, can pass from the borders of the arctic regions to the torrid zone, is forced, when winter approaches, to descend to the bottoms of lakes, rivers, and mill ponds to bury itself in the mud with eels and snapping turtles; or to creep ingloriously into a cavern, a rat hole, or a hollow tree, there to doze with snakes, toads, and other reptiles until the return of spring! Is not this true, ye wise men of Europe and America, who have published so many *credible* narratives on this subject? The Geese, the Ducks, the Catbird, and even the Wren, which creeps about our outhouses in summer like a mouse, are all acknowledged to be migratory, and to pass to southern regions at the approach of winter;—the Swallow alone, on whom heaven has conferred superior powers of wing, must sink in torpidity at the bottom of our rivers, or doze all winter in the caverns of the earth. I am myself something of a traveller, and foreign countries afford many novel sights: should I assert, that in some of my peregrinations I had met with a nation of Indians, all of whom, old and young, at the commencement of cold weather, descend to the bottom of their lakes and rivers, and there remain until the breaking up of frost; nay, should I affirm, that thousands of people in the neighbourhood of this city, regularly undergo the same semi-annual submersion—that I myself had fished up a whole family

of these from the bottom of Schuylkill, where they had lain *torpid* all winter, carried them home, and brought them all comfortably to themselves again. Should I even publish this in the learned pages of the Transactions of our Philosophical Society, who would believe me? Is then the organization of a Swallow less delicate than that of a man? Can a bird, whose vital functions are destroyed by a short privation of pure air and its usual food, sustain, for six months, a situation where the most robust man would perish in a few hours or minutes? Away with such absurdities!—They are unworthy of a serious refutation. I should be pleased to meet with a man who has been personally more conversant with birds than myself, who has followed them in their wide and devious routes—studied their various manners—mingled with and marked their peculiarities more than I have done; yet the miracle of a resuscitated swallow, in the depth of winter, from the bottom of a mill pond, is, I confess, a phenomenon in ornithology that I have never met with.

What better evidence have we that these fleet-winged tribes, instead of following the natural and acknowledged migrations of many other birds, lie torpid all winter in hollow trees, caves and other subterraneous recesses? That the Chimney Swallow, in the early part of summer, may have been found in a hollow tree, and in great numbers too, is not denied; such being in some places of the country (as will be shown in the history of that species), their actual places of rendezvous, on their first arrival, and their common roosting place long after; or that the Bank Swallows, also, soon after their arrival, in the early part of spring, may be chilled by the cold mornings which we frequently experience at that season, and be found in this state in their holes, I would as little dispute; but that either the one or the other has ever been found, *in the midst of winter* in a state of *torpidity*, I do not, cannot believe. Millions of trees of all dimensions are cut down every fall and winter of this country, where, in their proper season, Swallows swarm around us. Is it therefore in the least probable that we should, only once or twice in an age, have no other evidence than one or two soli-

tary and very suspicious reports of a Mr. Somebody having made a discovery of this kind? If caves were their places of winter retreat, perhaps no country on earth could supply them with a greater choice. I have myself explored many of these in various parts of the United States both in winter and in spring, particularly in that singular tract of country in Kentucky, called the *Barrens*, where some of these subterraneous caverns are several miles in length, lofty and capacious, and pass under a large and deep river—have conversed with the saltpetre workers by whom they are tenanted; but never heard or met with one instance of a Swallow having been found there in winter. These people treated such reports with ridicule.

It is to be regretted that a greater number of experiments have not been made, by keeping live Swallows through the winter, to convince these believers in the torpidity of birds, of their mistake. That class of cold-blooded animals which are *known* to become torpid during winter, and of which hundreds and thousands are found every season, are subject to the same when kept in a suitable room for experiment. How is it with the Swallows in this respect? Much powerful testimony might be produced on this point; the following experiments recently made by Mr. James Pearson of London, and communicated by Sir John Trevelyn, Bart. to Mr. Bewick, the celebrated engraver in wood, will be sufficient for our present purpose, and throw great light on this part of the subject.*

“Five or six of these birds were taken about the latter end of August, 1784, in a bat fowling net at night; they were put separately into small cages, and fed with nightingale’s food: in about a week or ten days they took food of themselves; they were then put altogether into a deep cage, four feet long, with gravel at the bottom; a broad shallow pan with water was placed in it, in which they sometimes washed themselves, and seemed much strengthened by it. One day Mr. Pearson observed that they went into the water with unusual eagerness, hurrying in and out again repeatedly with such swiftness as if they had been

* See Bewick’s *British Birds*, vol. i, p. 254.

suddenly seized with a frenzy. Being anxious to see the result, he left them to themselves about half an hour, and going to the cage again found them all huddled together in a corner apparently dead; the cage was then placed at a proper distance from the fire, when only two of them recovered and were as healthy as before—the rest died. The two remaining ones were allowed to wash themselves occasionally for a short time only; but their feet soon after became swelled and inflamed, which Mr. P. attributed to their perching, and they died about Christmas. Thus the first year's experiment was in some measure lost. Not discouraged by the failure of this, Mr. P. determined to make a second trial the succeeding year, from a strong desire of being convinced of the truth of their going into a state of torpidity. Accordingly the next season having taken some more birds he put them into the cage, and in every respect pursued the same methods as with the last; but to guard their feet from the bad effects of the damp and cold he covered the perches with flannel, and had the pleasure to observe that the birds thrived extremely well; they sung their song during the winter, and soon after Christmas began to moult, which they got through without any difficulty, and lived three or four years, regularly moulting every year at the usual time. On the renewal of their feathers it appeared that their tails were forked exactly the same as in those birds which return hither in the spring, and in every respect their appearance was the same. These birds, says Mr. Pearson, were exhibited to the Society for Promoting Natural History, on the fourteenth day of February, 1786, at the time they were in a deep moult, during a severe frost, when the snow was on the ground. Minutes of this circumstance were entered in the books of the society. These birds died at last from neglect, during a long illness which Mr. Pearson had: they died in the summer. Mr. P. concludes his very interesting account in these words: January 20th, 1797, I have now in my house, No. 21, Great Newport street, Long Acre, four Swallows in moult, in as perfect health as any birds ever appeared to be when moulting."

The Barn Swallow of the United States has hitherto been considered by many writers as the same with the common Chimney Swallow of Europe. They differ however considerably, in colour, as well as in habits; the European species having the belly and vent white, the American species those parts of a bright chestnut; the former building in the corners of chimneys, near the top, the latter never in such places; but usually in barns, sheds, and other outhouses, on beams, braces, rafters, &c. It is difficult to reconcile these constant differences of manners and markings in one and the same bird; I shall therefore take the liberty of considering the present as a separate and distinct species.

The Barn Swallow arrives in this part of Pennsylvania from the south on the last week in March, or the first week in April, and passes on to the north as far, at least, as the river St. Lawrence. On the east side of the great range of the Alleghany, they are dispersed very generally over the country, wherever there are habitations, even to the summit of high mountains; but, on account of the greater coldness of such situations, are usually a week or two later in making their appearance there. On the sixteenth of May, being on a shooting expedition on the top of Pocano mountain, Northampton, when the ice on that and on several successive mornings was more than a quarter of an inch thick, I observed with surprise a pair of these Swallows which had taken up their abode on a miserable cabin there. It was then about sun-rise, the ground white with hoar frost, and the male was twittering on the roof by the side of his mate with great sprightliness. The man of the house told me that a single pair came regularly there every season, and built their nest on a projecting beam under the eaves, about six or seven feet from the ground. At the bottom of the mountain, in a large barn belonging to the tavern there, I counted upwards of twenty nests, all seemingly occupied. In the woods they are never met with; but as you approach a farm they soon catch the eye, cutting their gambols in the air. Scarcely a barn, to which these birds can find access, is without them; and as public feeling is

universally in their favour, they are seldom or never disturbed. The proprietor of the barn last mentioned, a German, assured me, that if a man permitted the Swallows to be shot his cows would give bloody milk, and also that no barn where Swallows frequented would ever be struck with lightning; and I nodded assent. When the tenets of superstition "lean to the side of humanity" one can readily respect them. On the west side of the Alleghany these birds become more rare. In travelling through the states of Kentucky and Tennessee, from Lexington to the Tennessee river, in the months of April and May, I did not see a single individual of this species; though the Purple Martin, and, in some places, the Bank Swallow was numerous.

Early in May they begin to build. From the size and structure of the nest it is nearly a week before it is completely finished. One of these nests, taken on the twenty-first of June from the rafter to which it was closely attached, is now lying before me. It is in the form of an inverted cone with a perpendicular section cut off on that side by which it adhered to the wood. At the top it has an extension of the edge, or offset, for the male or female to sit on occasionally, as appeared by the dung; the upper diameter was about six inches by five, the height externally seven inches. This shell is formed of mud, mixed with fine hay as plasterers do their mortar with hair, to make it adhere the better; the mud seems to have been placed in regular strata, or layers, from side to side; the hollow of this cone (the shell of which is about an inch in thickness) is filled with fine hay, well stuffed in; above that is laid a handful of very large downy geese feathers; the eggs are five, white, specked and spotted all over with reddish brown. Owing to the semi-transparency of the shell the eggs have a slight tinge of flesh colour. The whole weighs about two pounds.

They have generally two broods in the season. The first make their appearance about the second week in June; and the last brood leave the nest about the tenth of August. Though it is not uncommon for twenty, and even thirty pair, to build in the same barn, yet every thing seems to be conducted with great

order and affection; all seems harmony among them, as if the interest of each were that of all. Several nests are often within a few inches of each other; yet no appearance of discord or quarrelling takes place in this peaceful and affectionate community.

When the young are fit to leave the nest, the old ones entice them out by fluttering backwards and forwards, twittering and calling to them every time they pass; and the young exercise themselves, for several days, in short essays of this kind, *within doors*, before they first venture abroad. As soon as they leave the barn they are conducted by their parents to the trees, or bushes, by the pond, creek, or river shore, or other suitable situation, where their proper food is most abundant, and where they can be fed with the greatest convenience to both parties. Now and then they take a short excursion themselves, and are also frequently fed while on wing by an almost instantaneous motion of both parties, rising perpendicularly in air and meeting each other. About the middle of August they seem to begin to prepare for their departure. They assemble on the roof in great numbers, dressing and arranging their plumage, and making occasional essays, twittering with great cheerfulness. Their song is, a kind of sprightly warble, sometimes continued for a considerable time. From this period to the eighth of September they are seen near the Schuylkill and Delaware, every afternoon, for two or three hours before sun-set, passing along to the south in great numbers, feeding as they skim along. I have counted several hundreds pass within sight in less than a quarter of an hour, all directing their course towards the south. The reeds are now their regular roosting places; and about the middle of September there is scarcely an individual of them to be seen. How far south they continue their route is uncertain; none of them remain in the United States. Mr. Bartram informs me, that during his residence in Florida, he often saw vast flocks of this and our other Swallows, passing from the peninsula towards the south in September and October; and also on their return to the north about the middle of March. It is highly probable, that

were the countries to the south of the gulf of Mexico, and as far south as the great river Marañon, visited and explored by a competent naturalist, these regions would be found to be the winter rendezvous of the very birds now before us, and most of our other migratory tribes.

In a small volume which I have lately met with, entitled "An Account of the British settlement of Honduras," by captain George Henderson, of the 5th West India regiment, published in London in 1809; the writer, in treating of that part of its natural history which relates to birds, gives the following particulars. "Myriads of Swallows," says he, "are also the occasional inhabitants of Honduras. The time of their residence is generally confined to the period of the rains, [that is from October to February] after which they totally disappear. There is something remarkably curious and deserving of notice in the ascent of these birds. As soon as the dawn appears they quit their place of rest, which is usually chosen amid the rushes of some watery savanna; and invariably rise to a certain height, in a compact spiral form, and which at a distance often occasions them to be taken for an immense column of smoke. This attained, they are then seen separately to disperse in search of food, the occupation of their day. To those who may have had the opportunity of observing the phenomenon of a water spout, the similarity of evolution, in the ascent of these birds, will be thought surprisingly striking. The descent, which regularly takes place at sun-set, is conducted much in the same way; but with inconceivable rapidity: and the noise which accompanies this can only be compared to the falling of an immense torrent; or the rushing of a violent gust of wind. Indeed, to an observer it seems wonderful, that thousands of these birds are not destroyed, in being thus propelled to the earth with such irresistible force."*

How devoutly it is to be wished that the natural history of those regions were more precisely known! So absolutely ne-

* Henderson's Honduras, p. 119.

cessary as it is to the perfect understanding of this department of our own!

The Barn Swallow is seven inches long, and thirteen inches in extent; bill black; upper part of the head, neck, back, rump and tail coverts, steel blue, which descends rounding on the breast; front and chin deep chestnut; belly, vent, and lining of the wing, light chestnut; wings and tail brown black, slightly glossed with reflexions of green; tail greatly forked, the exterior feather on each side an inch and a half longer than the next, and tapering towards the extremity, each feather, except the two middle ones, marked on its inner vane with an oblong spot of white; lores black; eye dark hazel; sides of the mouth yellow; legs dark purple.

The female differs from the male in having the belly and vent rufous white, instead of light chestnut; these parts are also slightly clouded with rufous; and the exterior tail feathers are shorter.

These birds are easily tamed, and soon become exceedingly gentle and familiar. I have frequently kept them in my room for several days at a time, where they employed themselves in catching flies, picking them from my clothes, hair, &c. calling out occasionally as they observed some of their old companions passing the windows.

SPECIES 3. *HIRUNDO VIRIDIS*.*

WHITE-BELLIED SWALLOW.

[Plate XXXVIII.—Fig. 3.]

PEALE'S *Museum*, No. 7707.

THIS is the species hitherto supposed by Europeans to be the same with their common Martin, *Hirundo urbica*, a bird nowhere to be found within the United States. The English Martin is blue black above; the present species greenish blue; the former has the whole rump white, and the legs and feet are covered with short white downy feathers; the latter has nothing of either. That ridiculous propensity in foreign writers, to consider most of our birds as *varieties* of their own, has led them into many mistakes, which it shall be the business of the author of the present work to point out, decisively, wherever he may meet with them.

The White-bellied Swallow arrives in Pennsylvania a few days later than the preceding species. It often takes possession of an apartment in the boxes appropriated to the Purple Martin; and also frequently builds and hatches in a hollow tree. The nest consists of fine loose dry grass, lined with large downy feathers, rising above its surface, and so placed as to curl inwards and completely conceal the eggs. These last are usually four or five in number, and pure white. They also have two broods in the season.

The voice of this species is low and guttural: they are more disposed to quarrel than the Barn Swallows, frequently fighting in the air for a quarter of an hour at a time, particularly in spring, all the while keeping up a low rapid chatter. They also sail more in flying; but during the breeding season frequent the same

* *Hirundo bicolor*, VIEILL. Ois. de l'Am. Sept. pl. 31.

situations in quest of similar food. They inhabit the northern Atlantic states as far as the District of Maine, where I have myself seen them; and my friend Mr. Gardiner informs me, that they are found on the coast of Long Island and its neighbourhood. About the middle of July I observed many hundreds of these birds sitting on the flat sandy beach near the entrance of Great Egg Harbour. They were also very numerous among the myrtles of these low islands, completely covering some of the bushes. One man told me, that he saw one hundred and two shot at a single discharge. For some time before their departure they subsist principally on the myrtle berries (*myrica cerifera*) and become extremely fat. They leave us early in September.

This species appears to have remained hitherto undescribed, owing to the misapprehension before mentioned. It is not perhaps quite so numerous as the preceding, and rarely associates with it to breed, never using mud of any kind in the construction of its nest.

The White-bellied Swallow is five inches and three quarters long, and twelve inches in extent; bill and eye black; upper parts a light glossy greenish blue; wings brown black, with slight reflexions of green; tail forked, the two exterior feathers being about a quarter of an inch longer than the middle ones, and all of a uniform brown black; lores black; whole lower parts pure white; wings when shut extend about a quarter of an inch beyond the tail; legs naked, short and strong, and, as well as the feet, of a dark purplish flesh colour; claws stout.

The female has much less of the greenish gloss than the male, the colours being less brilliant; otherwise alike.

*SPECIES 4. HIRUNDO RIPARIA.**

BANK SWALLOW, OR SAND MARTIN.

[Plate XXXVIII.—Fig. 4.]

LATH. *Syn.* IV, p. 568—10.—*Arct. Zool.* II, No. 332.—*L'Hirondelle de rivage*, BUFF. VI, 632. *Pl. Enl.* 543. f. 2.—*TURT. Syst.* 629.—*PEALE'S Museum*, No. 7637.

THIS appears to be the most sociable with its kind and the least intimate with man, of all our Swallows; living together in large communities of sometimes three or four hundred. On the high sandy bank of a river, quarry, or gravel pit, at a foot or two from the surface, they commonly scratch out holes for their nests, running them in a horizontal direction to the depth of two and sometimes three feet. Several of these holes are often within a few inches of each other, and extend in various strata along the front of the precipice, sometimes for eighty or one hundred yards. At the extremity of this hole a little fine dry grass with a few large downy feathers form the bed on which their eggs, generally five in number, and pure white, are deposited. The young are hatched late in May; and here I have taken notice of the common Crow, in parties of four or five, watching at the entrance of these holes, to seize the first straggling young that should make its appearance. From the clouds of Swallows that usually play round these breeding places, they remind one at a distance of a swarm of bees.

The Bank Swallow arrives here earlier than either of the preceding; begins to build in April, and has commonly two broods in the season. Their voice is a low mutter. They are particularly fond of the shores of rivers, and, in several places along the

* LINN. *Syst.* I, p. 344.—GMEL. *Syst.* I, p. 1019.—LATH. *Ind. Orn.* II, p. 575.

Ohio, they congregate in immense multitudes. We have sometimes several days of cold rain and severe weather after their arrival in spring, from which they take refuge in their holes, clustering together for warmth, and have been frequently found at such times in almost a lifeless state with the cold; which circumstance has contributed to the belief that they lie torpid all winter in these recesses. I have searched hundreds of these holes in the months of December and January, but never found a single Swallow, dead, living, or torpid. I met with this bird in considerable numbers on the shores of the Kentucky river, between Lexington and Danville. They likewise visit the sea shore, in great numbers, previous to their departure, which continues from the last of September to the middle of October.

The Bank Swallow is five inches long, and ten inches in extent; upper parts mouse coloured, lower white, with a band of dusky brownish across the upper part of the breast; tail forked, the exterior feather slightly edged with whitish; lores and bill black; legs with a few tufts of downy feathers behind; claws fine pointed and very sharp; over the eye a streak of whitish; lower side of the shafts white; wings and tail darker than the body. The female differs very little from the male.

This bird appears to be in nothing different from the European species; from which circumstance, and its early arrival here, I would conjecture that it passes to a high northern latitude on both continents.

*SPECIES 5. HIRUNDO PELASGIA.**

CHIMNEY SWALLOW.

[Plate XXXIX.—Fig. 1.]

LATH. *Syn.* v, p. 583—32.—CATESB. *Car. App. t.* 8.—*Hirondelle da la Caroline*, BUFF. vi, p. 700.—*Hirundo Carolinensis*, BRISS. II, p. 501, 9.—*Aculeated Swallow*, ARCT. Zool. II, No. 335—18.—TURT. *Syst.* p. 630.—PEALE'S *Museum*, No. 7663.

THIS species is peculiarly our own; and strongly distinguished from all the rest of our Swallows by its figure, flight, and manners. Of the first of these the representation in the plate will give a correct idea; its other peculiarities shall be detailed as fully as the nature of the subject requires.

This Swallow, like all the rest of its tribe in the United States, is migratory, arriving in Pennsylvania late in April or early in May, and dispersing themselves over the whole country wherever there are vacant chimneys in summer sufficiently high and convenient for their accommodation. In no other situation with us are they observed at present to build. This circumstance naturally suggests the query, Where did these birds construct their nests before the arrival of Europeans in this country, when there were no such places for their accommodation? I would answer probably in the same situations in which they still continue to build in the remote regions of our western forests, where European improvements of this kind are scarcely to be found, namely, in the hollow of a tree, which in some cases has the nearest resemblance to their present choice of any other. One of the first settlers in the state of Kentucky informed me, that he cut down a large hollow beech tree which contained forty or fifty nests of the Chimney Swallow, most of

* LINN. *Syst.* I, p. 345.—GMEL. *Syst.* I, p. 1023.—LATH. *Ind. Orn.* II, p. 581.

which by the fall of the tree, or by the weather, were lying at the bottom of the hollow, but sufficient fragments remained adhering to the sides of the tree to enable him to number them. They appeared, he said, to be of many years standing. The present site which they have chosen must however hold out many more advantages than the former, since we see that in the whole thickly settled parts of the United States these birds have uniformly adopted this new convenience; not a single pair being observed to prefer the woods. Security from birds of prey and other animals—from storms that frequently overthrow the timber, and the numerous ready conveniences which these new situations afford are doubtless some of the advantages. The choice they have made certainly bespeaks something more than mere unreasoning instinct, and does honour to their discernment.

The nest of this bird is of singular construction, being formed of very small twigs, fastened together with a strong adhesive glue or gum, which is secreted by two glands, one on each side of the hind head, and mixes with the saliva. With this glue, which becomes hard as the twigs themselves, the whole nest is thickly besmeared. The nest itself is small and shallow, and attached by one side or edge to the wall, and is totally destitute of the soft lining with which the others are so plentifully supplied. The eggs are generally four, and white. They generally have two broods in the season. The young are fed at intervals during the greater part of the night, a fact which I have had frequent opportunities of remarking both here and in the Mississippi territory. The noise which the old ones make in passing up and down the funnel has some resemblance to distant thunder. When heavy and long continued rains occur, the nest, losing its hold, is precipitated to the bottom. This disaster frequently happens. The eggs are destroyed; but the young, though blind, (which they are for a considerable time) sometimes scramble up along the vent, to which they cling like squirrels, the muscularity of their feet and the sharpness of their claws at this tender age being remarkable. In this situa-

tion they continue to be fed for perhaps a week or more. Nay it is not uncommon for them voluntarily to leave the nest long before they are able to fly, and to fix themselves on the wall, where they are fed until able to hunt for themselves.

When these birds first arrive in spring, and for a considerable time after, they associate together every evening in one general rendezvous; those of a whole district roosting together. This place of repose, in the more unsettled parts of the country, is usually a large hollow tree open at top, trees of that kind, or *Swallow trees*, as they are usually called, having been noticed in various parts of the country and generally believed to be the winter quarters of these birds, where, heaps upon heaps, they dozed away the winter in a state of torpidity. Here they have been seen on their resurrection in spring, and here they have again been remarked descending to their death-like sleep in autumn.

Among various accounts of these trees that might be quoted, the following are selected as bearing the marks of authenticity. "At Middlebury, in this state," says Mr. Williams, Hist. of Vermont, p. 16; "there was a large hollow elm, called by the people in the vicinity, the Swallow tree. From a man who for several years lived within twenty rods of it, I procured this information. He always thought the Swallows tarried in the tree through the winter, and avoided cutting it down on that account. About the first of May the Swallows came out of it in large numbers, about the middle of the day, and soon returned. As the weather grew warmer they came out in the morning with a loud noise, or roar, and were soon dispersed. About half an hour before sun-down they returned in millions, circulating two or three times round the tree, and then descending like a stream into a hole about sixty feet from the ground. It was customary for persons in the vicinity to visit this tree to observe the motions of these birds: and when any persons disturbed their operations by striking violently against the tree with their axes, the Swallows would rush out in millions and with a great noise. In November, 1791, the top of this tree was blown

down twenty feet below where the Swallows entered. There has been no appearance of the Swallows since. Upon cutting down the remainder an immense quantity of excrements, quills and feathers, were found, but no appearance or relics of any nests.

“Another of these Swallow trees was at Bridport. The man who lived the nearest to it gave this account. The Swallows were first observed to come out of the tree in the spring about the time that the leaves first began to appear on the trees; from that season they came out in the morning about half an hour after sun-rise. They rushed out like a stream, as big as the hole in the tree would admit, and ascended in a perpendicular line until they were above the height of the adjacent trees; then assumed a circular motion, performing their evolutions two or three times, but always in a larger circle, and then dispersed in every direction. A little before sun-down they returned in immense numbers, forming several circular motions, and then descended like a stream into the hole, from whence they came out in the morning. About the middle of September they were seen entering the tree for the last time. These birds were all of the species called the House or Chimney Swallow. The tree was a large hollow elm; the hole at which they entered was about forty feet above the ground, and about nine inches in diameter. The Swallows made their first appearance in the spring and their last appearance in the fall in the vicinity of this tree; and the neighbouring inhabitants had no doubt but that the Swallows continued in it during the winter. A few years ago a hole was cut at the bottom of the tree; from that time the Swallows have been gradually forsaking the tree and have now almost deserted it.”

Though Mr. Williams himself, as he informs us, is led to believe from these and some other particulars which he details, “that the House Swallow in this part of America generally resides during the winter in the hollow of trees; and the Ground Swallows [Bank Swallows] find security in the mud at the bottom of lakes, rivers, and ponds,” yet I cannot in the cases just

cited see any sufficient cause for such a belief. The birds were seen to pass out on the first of May or in the spring when the leaves began to appear on the trees, and about the middle of September they were seen entering the tree for the last time; but there is no information here of their being seen at any time during winter either within or around the tree. This most important part of the matter is taken for granted without the least examination, and as will be presently shown, without foundation. I shall, I think, also prove that if these trees had been cut down in the depth of winter not a single Swallow would have been found either in a living or a torpid state! And that this was merely a place of rendezvous for *active living birds* is evident from the "immense quantity of excrements" found within it, which birds in a state of *torpidity* are not supposed to produce. The total absence of the relics of nests is a proof that it was not a breeding place, and that the whole was nothing more than one of those places to which this singular bird resorts, immediately on its arrival in May, in which also many of the males continue to roost during the whole summer, and from which they regularly depart about the middle of September. From other circumstances it appears probable that some of these trees have been for ages the summer rendezvous or general roosting place of the whole Chimney Swallows of an extensive district. Of this sort I conceive the following to be one which is thus described by a late traveller to the westward.

Speaking of the curiosities of the state of Ohio the writer observes, "In connexion with this I may mention a large collection of feathers found within a hollow tree which I examined with the Rev. Mr. Story, May 18th, 1803. It is in the upper part of Waterford, about two miles distant from the Muskingum. A very large sycamore, which through age had decayed and fallen down, contained in its hollow trunk, five and a half feet in diameter, and for nearly fifteen feet upwards, a mass of decayed feathers with a small admixture of brownish dust and the exuviae of various insects. The feathers were so rotten that it was impossible to determine to what kind of birds they belong-

ed. They were less than those of the pigeon; and the largest of them were like the pinion and tail feathers of the Swallow. I examined carefully this astonishing collection in the hope of finding the bones and bills, but could not distinguish any. The tree with some remains of its ancient companions lying around was of a growth preceding that of the neighbouring forest. Near it and even out of its mouldering ruins grow thrifty trees of a size which indicate two or three hundred years of age.”*

Such are the usual roosting places of the Chimney Swallow in the more thinly settled parts of the country. In towns, however, they are differently situated, and it is matter of curiosity to observe that they frequently select the court-house chimney for their general place of rendezvous, as being usually more central, and less liable to interruption during the night. I might enumerate many places where this is their practice. Being in the town of Reading, Pennsylvania, in the month of August, I took notice of sixty or eighty of these birds, a little before evening, amusing themselves by ascending and descending the chimney of the court-house there. I was told that in the early part of summer they were far more numerous at that particular spot. On the twentieth of May in returning from an excursion to the Great Pine swamp, I spent part of the day in the town of Easton, where I was informed by my respected friend Mordecai Churchman, cashier of the bank there, and one of the people called quakers, that the Chimney Swallows of Easton had selected the like situation; and that from the windows of his house, which stands nearly opposite to the court-house, I might in an hour or two witness their whole manœuvres.

I accepted the invitation which pleasure. Accordingly a short time after sun-set the Chimney Swallows, which were generally dispersed about town, began to collect around the court-house, their numbers every moment increasing, till, like motes in the sunbeams, the air seemed full of them. These while they mingled amongst each other seemingly in every direction, ut-

* Harris's Journal, p. 180.

tering their peculiar note with great sprightliness, kept a regular circuitous sweep around the top of the court-house, and about fourteen or fifteen feet above it, revolving with great rapidity for the space of at least ten minutes. There could not be less than four or five hundred of them. They now gradually varied their line of motion until one part of its circumference passed immediately over the chimney and about five or six feet above it. Some as they passed made a slight feint of entering, which was repeated by those immediately after, and by the whole circling multitude in succession; in this feint they approached nearer and nearer at every revolution, dropping perpendicularly, but still passing over; the circle meantime becoming more and more contracted, and the rapidity of its revolution greater as the dusk of evening increased, until at length one, and then another, dropped in, another and another followed, the circle still revolving until the whole multitude had descended except one or two. These flew off as if to collect the stragglers, and in a few seconds returned with six or eight more, which, after one or two rounds, dropped in one by one, and all was silence for the night. It seemed to me hardly possible that the internal surface of the vent could accommodate them all, without clustering on one another, which I am informed they never do; and I was very desirous of observing their ascension in the morning, but having to set off before day, I had not that gratification. Mr. Churchman however, to whom I have since transmitted a few queries, has been so obliging as to inform me, that towards the beginning of June the number of those that regularly retired to the court-house to roost, was not more than one-fourth of the former; that on the morning of the twenty-third of June he particularly observed their reascension, which took place at a quarter past four, or twenty minutes before sun-rise, and that they passed out in less than three minutes. That at my request the chimney had been examined from above; but that as far down at least as nine feet, it contained no nests; though at a former period it is certain that their nests were very numerous there, so that the chimney was almost choked, and a sweep could with

difficulty get up it. But then it was observed that their place of nocturnal retirement was in another quarter of the town. "On the whole," continues Mr. Churchman, "I am of opinion, that those who continue to roost at the court-house are male birds, or such as are not engaged in the business of incubation, as that operation is going on in almost every unoccupied chimney in town. It is reasonable to suppose if they made use of that at the court-house for this purpose, at least some of their nests would appear towards the top, as we find such is the case where but few nests are in a place."

In a subsequent letter Mr. Churchman writes as follows:—"After the young brood produced in the different chimneys in Easton had taken wing, and a week or ten days previous to their total disappearance, they entirely forsook the court house chimney, and rendezvoused in accumulated numbers in the southernmost chimney of John Ross's mansion, situated perhaps one hundred feet northeastward of the court house. In this last retreat I several times counted more than two hundred go in of an evening, when I could not perceive a single bird enter the court-house chimney. I was much diverted one evening on seeing a cat, which came upon the roof of the house, and placed herself near the chimney, where she strove to arrest the birds as they entered, without success; she at length ascended to the chimney top and took her station, and the birds descended in gyrations without seeming to regard grimalkin, who made frequent attempts to grab them. I was pleased to see that they all escaped her fangs. About the first week in the ninth month [September] the birds quite disappeared; since which I have not observed a single individual. Though I was not so fortunate as to be present at their general assembly and council when they concluded to take their departure, nor did I see them commence their flight; yet I am fully persuaded that none of them remain in any of our chimneys here. I have had access to Ross's chimney where they last resorted, and could see the lights out from bottom to top, without the least vestige or appearance of any birds. Mary Ross also informed me, that they have had their

chimneys swept previous to their making fires, and though late in autumn no birds have been found there. Chimneys also which have not been used have been ascended by sweeps in the winter without discovering any. Indeed all of them are swept every fall and winter, and I have never heard of the Swallows being found in either a dead, living or torpid state. As to the court-house it has been occupied as a place of worship two or three times a week for several weeks past, and at those times there has been fire in the stoves, the pipes of them both going into the chimney, which is shut up at bottom by brick work: and as the birds had forsaken that place, it remains pretty certain that they did not return there; and if they did the smoke I think would be deleterious to their existence; especially as I never knew them to resort to kitchen chimneys where fire was kept in the summer. I think I have noticed them enter such chimneys for the purpose of exploring; but I have also noticed that they immediately ascended, and went off, on finding fire and smoke."

The Chimney Swallow is easily distinguished in air from the rest of its tribe here, by its long wings, its short body, the quick and slight vibrations of its wings, and its wide, unexpected diving rapidity of flight; shooting swiftly in various directions without any apparent motion of the wings, and uttering the sounds *tsip tsip tsip tsee tsee* in a hurried manner. In roosting, the thorny extremities of its tail are thrown in for its support. It is never seen to alight but in hollow trees or chimneys; is always most gay and active in wet and gloomy weather, and is the earliest abroad in morning, and latest out in evening of all our Swallows. About the first or second week in September, they move off to the south, being often observed on their route accompanied by the Purple Martins.

When we compare the manners of these birds while here with the account given by Capt. Henderson of those that winter in such multitudes at Honduras, it is impossible not to be struck with the resemblance; or to suppress our strong suspicions that they may probably be the very same.

This species is four inches and a half in length, and twelve inches in extent! altogether of a deep sooty brown, except the chin and line over the eye, which are of a dull white; the lores, as in all the rest, are black; bill extremely short, hard and black, nostrils placed in a slightly elevated membrane; legs covered with a loose purplish skin; thighs naked and of the same tint; feet extremely muscular; the three fore toes nearly of a length; claws very sharp; the wing when closed extends an inch and a half beyond the tip of the tail, which is rounded, and consists of *ten* feathers scarcely longer than their coverts; their shafts extend beyond the vanes, are sharp pointed, strong, and very elastic, and of a deep black colour; the shafts of the wing quills are also remarkably strong; eye black, surrounded by a bare blackish skin or orbit.

The female can scarcely be distinguished from the male by her plumage.

GENUS 47. CAPRIMULGUS. GOATSUCKER.

SPECIES 1. *C. CAROLINENSIS*.*

CHUCK-WILL'S-WIDOW.

[Plate LIV.—Fig. 2.]

PEALE'S *Museum*, No. 7723.

THIS solitary bird is rarely found to the north of James river in Virginia on the sea-board, or of Nashville in the state of Tennessee in the interior; and no instance has come to my knowledge in which it has been seen either in New Jersey, Pennsylvania or Maryland. On my journey south I first met with it between Richmond and Petersburg in Virginia, and also on the banks of the Cumberland in Tennessee.

Mr. Pennant has described this bird under the appellation of the *Short-winged Goatsucker*, (Arct. Zool. No. 336.) from a specimen which he received from Dr. Garden of Charleston, South Carolina; but in speaking of its manners he confounds it with the Whip-poor-will, though the latter is little more than half the cubic bulk of the former, and its notes altogether different. "In South Carolina," says this writer, speaking of the present species, "it is called, from one of its notes, *Chuck, chuck-will's-widow*; and in the northern provinces *Whip-poor-will*, from the resemblance which another of its notes bears to those words."† He then proceeds to detail the manners of the common Whip-poor-will, by extracts from Dr. Garden and Mr. Kalm, which clearly prove that all of them were personally unacquainted with that bird; and had never seen or examined any other than

* GMEL. Syst. I, p. 1028.—LATH. Ind. Orn. II, p. 584.—*Caprimulgus rufus*, VIEILL. Ois. de l'Am. Sept. Pl. 25, female.

† Arct. Zool. p. 434.

two of our species, the Short-winged or Chuck-will's-widow, and the Long-winged, or Night Hawk, to both of which they indiscriminately attribute the notes and habits of the Whip-poor-will.

The Chuck-will's-widow, so called from its notes which seem exactly to articulate those words, arrives on the sea coast of Georgia about the middle of March, and in Virginia early in April. It commences its singular call generally in the evening, soon after sunset, and continues it with short occasional interruptions for several hours. Towards morning these repetitions are renewed, and continue until dawn has fairly appeared. During the day it is altogether silent. This note, or call, instantly attracts the attention of a stranger, and is strikingly different from that of the Whip-poor-will. In sound and articulation it seems plainly to express the words which have been applied to it (*Chuck-will's-widow*), pronouncing each syllable leisurely and distinctly, putting the principal emphasis on the last word. In a still evening it may be heard at the distance of nearly a mile, the tones of its voice being stronger and more full than those of the Whip-poor-will, who utters his with much greater rapidity. In the Chickasaw country, and throughout the whole Mississippi territory, I found the present species very numerous in the months of April and May, keeping up a continued noise during the whole evening, and in moonlight throughout the whole of the night.

The flight of this bird is low, skimming about at a few feet above the surface of the ground, frequently settling on old logs, or on the fences, and from thence sweeping around in pursuit of various winged insects that fly in the night. Like the Whip-poor-will it prefers the declivities of glens and other deeply shaded places, making the surrounding mountains ring with echoes the whole evening. I several times called the attention of the Chickasaws to the notes of this bird, on which occasions they always assumed a grave and thoughtful aspect; but it appeared to me that they made no distinction between the two species;

so that whatever superstitious notions they may entertain of the one are probably applied to both.

This singular genus of birds, formed to subsist on the superabundance of nocturnal insects, are exactly and surprisingly fitted for their peculiar mode of life. Their flight is low, to accommodate itself to their prey; silent, that they may be the better concealed, and sweep upon it unawares; their sight most acute in the dusk, when such insects are abroad; their evolutions something like those of the bat, quick and sudden; their mouths capable of prodigious expansion, to seize with more certainty, and furnished with long branching hairs, or bristles, serving as palisades to secure what comes between them. Reposing so much during the heats of day they are much infested with vermin, particularly about the head, and are provided with a comb on the inner edge of the middle claw, with which they are often employed in ridding themselves of these pests, at least when in a state of captivity. Having no weapons of defence except their wings, their chief security is in the solitude of night, and in their colour and close retreats by day; the former so much resembling that of dead leaves of various hues as not to be readily distinguished from them even when close at hand.

The Chuck-will's-widow lays its eggs, two in number, on the ground, generally, and I believe always, in the woods; it makes no nest; the eggs are of a dull olive colour, sprinkled with darker specks, are about as large as those of a Pigeon, and exactly oval. Early in September they retire from the United States.

This species is twelve inches long, and twenty-six in extent; bill yellowish, tip with black; the sides of the mouth are armed with numerous long bristles, strong, tapering, and furnished with finer hairs branching from each; cheeks and chin rust colour, specked with black; over the eye extends a line of small whitish spots; head and back very deep brown, powdered with cream, rust and bright ferruginous, and marked with long ragged streaks of black; scapulars broadly spotted with deep black, bordered with cream, and interspersed with whitish; the plumage of that part of the neck which falls over the back is long,

something like that of a cock, and streaked with yellowish brown; wing quills barred with black and bright rust; tail rounded, extending about an inch beyond the tips of the wings; it consists of ten feathers, the four middle ones are powdered with various tints of ferruginous, and elegantly marked with fine zig-zag lines and large herring-bone figures of black; exterior edges of the three outer feathers barred like the wings; their interior vanes for two-thirds of their length are pure snowy white, marbled with black and ferruginous at the base; this white spreads over the greater part of the three outer feathers near their tips; across the throat is a slight band or mark of whitish; breast black, powdered with rust; belly and vent lighter; legs feathered before nearly to the feet, which are of a dirty purplish flesh colour; inner side of the middle claw deeply pectinated.

The female differs chiefly in wanting the pure white on the three exterior tail feathers, these being more of a brownish cast.

*SPECIES 2. CAPRIMULGUS AMERICANUS.**

NIGHT-HAWK.

[Plate XL.—Fig. 1, *Male*.—Fig. 2, *Female*.]

Long-winged Goatsucker, Arct. Zool. No. 337.—PEALE'S *Museum*, No. 7723, *male*; 7724, *female*.

THIS bird, in Virginia and some of the southern districts, is called a bat; the name Night-hawk is usually given it in the middle and northern states, probably on account of its appearance when on wing very much resembling some of our small Hawks, and from its habit of flying chiefly in the evening. Though it is a bird universally known in the United States, and inhabits North America, in summer, from Florida to Hudson's Bay, yet its history has been involved in considerable obscurity by foreign writers, as well as by some of our own country. Of this I shall endeavour to divest it in the present account.

Three species only, of this genus, are found within the United States; the *Chuck-will's-widow*, the *Whip-poor-will*, and the *Night-hawk*. The first of these is confined to those states lying south of Maryland; the other two are found generally over the union, but are frequently confounded one with the other, and by some supposed to be one and the same bird. A comparison of this with the succeeding plate, which contains the figure of the *Whip-poor-will*, will satisfy those who still have their doubts on this subject; and the great difference of manners which distinguishes each will render this still more striking and satisfactory.

* *Caprimulgus popetue*, VIEILL. *Ois. de l'Am. Sept. pl. 24, female*.

On the last week in April, the Night-Hawk commonly makes its first appearance in this part of Pennsylvania. At what particular period they enter Georgia I am unable to say; but I find by my notes, that in passing to New Orleans by land, I first observed this bird in Kentucky on the twenty-first of April. They soon after disperse generally over the country, from the sea shore to the mountains, even to the heights of the Alleghany; and are seen, towards evening, in pairs, playing about, high in air, pursuing their prey, wasps, flies, beetles, and various other winged insects of the larger sort. About the middle of May the female begins to lay. No previous preparation or construction of nest is made; though doubtless the particular spot has been reconnoitred and determined on. This is sometimes in an open space in the woods, frequently in a ploughed field, or in the corner of a corn-field. The eggs are placed on the bare ground; in all cases on a dry situation, where the colour of the leaves, ground, stones or other circumjacent parts of the surface may resemble the general tint of the eggs, and thereby render them less easy to be discovered. The eggs are most commonly two, rather oblong, equally thick at both ends, of a dirty bluish white, and marked with innumerable touches of dark olive brown. To the immediate neighbourhood of this spot the male and female confine themselves, roosting on the high trees adjoining, during the greater part of the day, seldom however together, and almost always on separate trees. They also sit lengthwise on the branch, fence or limb on which they roost, and never across, like most other birds; this seems occasioned by the shortness and slender form of their legs and feet, which are not at all calculated to grasp the branch with sufficient firmness to balance their bodies.

As soon as incubation commences, the male keeps a most vigilant watch around. He is then more frequently seen playing about in the air over the place, even during the day, mounting by several quick vibrations of the wings, then a few slower, uttering all the while a sharp harsh squeak, till having gained the highest point, he suddenly precipitates himself, head fore-

most, and with great rapidity, down sixty or eighty feet, wheeling up again as suddenly; at which instant is heard a loud booming sound, very much resembling that produced by blowing strongly into the bung hole of an empty hogshead; and which is doubtless produced by the sudden expansion of his capacious mouth, while he passes through the air, as exhibited in the figure on the plate. He again mounts by alternate quick and leisurely motions of the wings, playing about as he ascends, uttering his usual hoarse squeak, till in a few minutes he again dives with the same impetuosity and violent sound as before. Some are of opinion that this is done to intimidate man or beast from approaching his nest, and he is particularly observed to repeat these divings most frequently around those who come near the spot, sweeping down past them, sometimes so near, and so suddenly, as to startle and alarm them. The same individual is, however, often seen performing these manœuvres over the river, the hill, the meadow and the marsh in the space of a quarter of an hour, and also towards the fall, when he has no nest. This singular habit belongs peculiarly to the male. The female has, indeed, the common hoarse note, and much the same mode of flight; but never precipitates herself in the manner of the male. During the time she is sitting, she will suffer you to approach within a foot or two before she attempts to stir, and when she does, it is in such a fluttering, tumbling manner, and with such appearance of a lame and wounded bird, as nine times in ten to deceive the person, and induce him to pursue her. This "pious fraud," as the poet Thomson calls it, is kept up until the person is sufficiently removed from the nest, when she immediately mounts and disappears. When the young are first hatched it is difficult to distinguish them from the surface of the ground, their down being of a pale brownish colour, and they are altogether destitute of the common shape of birds, sitting so fixed and so squat as to be easily mistaken for a slight prominent mouldiness lying on the ground. I cannot say whether they have two broods in the season; I rather conjecture that they have generally but one.

The Night-hawk is a bird of strong and vigorous flight, and of large volume of wing. It often visits the city, darting and squeaking over the streets at a great height, diving perpendicularly with the same hollow sound as before described. I have also seen them sitting on chimney tops in some of the most busy parts of the city, occasionally uttering their common note.

When the weather happens to be wet and gloomy, the Night-hawks are seen abroad at all times of the day, generally at a considerable height; their favourite time, however, is from two hours before sun-set until dusk. At such times they seem all vivacity, darting about in the air in every direction, making frequent short sudden turnings, as if busily engaged in catching insects. Even in the hottest, clearest weather, they are occasionally seen abroad, squeaking at short intervals. They are also often found sitting along the fences, basking themselves in the sun. Near the sea-shore, in the vicinity of extensive salt marshes, they are likewise very numerous, skimming over the meadows, in the manner of Swallows, until it is so dark that the eye can no longer follow them.

When wounded and taken, they attempt to intimidate you by opening their mouth to its utmost stretch, throwing the head forwards, and uttering a kind of guttural whizzing sound, striking also violently with their wings, which seem to be their only offensive weapons; for they never attempt to strike with the bill or claws.

About the middle of August they begin to move off towards the south; at which season they may be seen almost every evening, from five o'clock until after sun-set, passing along the Schuylkill and the adjacent shores, in widely scattered multitudes, all steering towards the south. I have counted several hundreds within sight at the same time, dispersed through the air, and darting after insects as they advanced. These occasional processions continue for two or three weeks; none are seen travelling in the opposite direction. Sometimes they are accompanied by at least twice as many Barn Swallows, some Chimney Swallows and Purple Martins. They are also most numerous imme-

diately preceding a north-east storm. At this time also they abound in the extensive meadows on the Schuylkill and Delaware, where I have counted fifteen skimming over a single field in an evening. On shooting some of these, on the fourteenth of August, their stomachs were almost exclusively filled with crickets. From one of them I took nearly a common snuff-box full of these insects, all seemingly fresh swallowed.

By the middle or twentieth of September very few of these birds are to be seen in Pennsylvania; how far south they go, or at what particular time they pass the southern boundaries of the United States I am unable to say. None of them winter in Georgia.

The ridiculous name *Goatsucker*, which was first bestowed on the European species from a foolish notion that it sucked the teats of the goats, because probably it inhabited the solitary heights where they fed, which nickname has been since applied to the whole genus, I have thought proper to omit. There is something worse than absurd in continuing to brand a whole family of birds with a knavish name, after they are universally known to be innocent of the charge. It is not only unjust, but tends to encourage the belief in an idle fable that is totally destitute of all foundation.

The Night-hawk is nine inches and a half in length, and twenty-three inches in extent; the upper parts are of a very deep blackish brown, unmixed on the primaries, but thickly sprinkled or powdered on the back scapulars and head with innumerable minute spots and streaks of a pale cream colour, interspersed with specks of reddish; the scapulars are barred with the same, also the tail coverts and tail, the inner edges of which are barred with white and deep brownish black for an inch and a half from the tip, where they are crossed broadly with a band of white, the two middle ones excepted, which are plain deep brown, barred and sprinkled with light clay; a spot of pure white extends over the five first primaries, the outer edge of the exterior feather excepted, and about the middle of the wing; a triangular spot of white also marks the throat, bending up on

each side of the neck; the bill is exceeding small, scarcely one-eighth of an inch in length, and of a black colour; the nostrils circular, and surrounded with a prominent rim; eye large and full, of a deep bluish black; the legs are short, feathered a little below the knees, and, as well as the toes, of a purplish flesh colour, seamed with white; the middle claw is pectinated on its inner edge, to serve as a comb to clear the bird of vermin; the whole lower parts of the body are marked with transverse lines of dusky and yellowish. The tail is somewhat *shorter* than the wings when shut, is handsomely forked, and consists of ten broad feathers; the mouth is extremely large, and of a reddish flesh colour within; *there are no bristles about the bill*; the tongue is very small, and attached to the inner surface of the mouth.

The female measures about nine inches in length and twenty-two in breadth; differs in having no white band on the tail, but has the spot of white on the wing; wants the triangular spot of white on the throat, instead of which there is a dully defined mark of a reddish cream colour; the wings are nearly black, all the quills being slightly tipped with white; the tail is as in the male, and minutely tipped with white; all the scapulars and whole upper parts are powdered with a much lighter gray.

There is no description of the present species in Turton's translation of Linnæus. The characters of the genus given in the same work are also in this case incorrect, viz. "*mouth furnished with a series of bristles—tail not forked*," the Night-hawk having nothing of the former, and its tail being largely forked.

*CAPRIMULGUS VOCIFERUS.**

WHIP-POOR-WILL.

[Plate XLI.—Fig. 1, *Male*.—Fig. 2, *Female*.—Fig. 3, *Young*.]

PEALE'S *Museum*, No. 7721, *male*, 7722, *female*.

THIS is a singular and very celebrated species, universally noted over the greater part of the United States for the loud reiterations of his favourite call in spring; and yet personally he is but little known, most people being unable to distinguish this from the preceding species, when both are placed before them; and some insisting that they are the same. This being the case, it becomes the duty of his historian to give a full and faithful delineation of his character and peculiarity of manners, that his existence as a distinct and independent species may no longer be doubted, nor his story mingled confusedly with that of another. I trust that those best acquainted with him will bear witness to the fidelity of the portrait.

On or about the twenty-fifth of April, if the season be not uncommonly cold, the Whip-poor-will is first heard in this part of Pennsylvania, in the evening, as the dusk of twilight commences, or in the morning as soon as dawn has broke. In the state of Kentucky I first heard this bird on the fourteenth of April, near the town of Danville. The notes of this solitary bird, from the ideas which are naturally associated with them, seem like the voice of an old friend, and are listened to by almost all with great interest. At first they issue from some retired part of the woods, the glen or mountain; in a few evenings perhaps we hear them from the adjoining coppice—the garden fence—the road before the door, and even from the roof of the dwell-

* *Caprimulgus virginianus*, VIEILL. *Ois. de l'Am. Sept. pl.* 23.

ling house, long after the family have retired to rest. Some of the more ignorant and superstitious consider this near approach as foreboding no good to the family, nothing less than sickness, misfortune or death to some of its members; these visits, however, so often occur without any bad consequences, that this superstitious dread seems on the decline.

He is now a regular acquaintance. Every morning and evening his shrill and rapid repetitions are heard from the adjoining woods, and when two or more are calling out at the same time, as is often the case in the pairing season, and at no great distance from each other, the noise, mingling with the echoes from the mountains, is really surprising. Strangers, in parts of the country where these birds are numerous, find it almost impossible for some time to sleep; while to those long acquainted with them, the sound often serves as a lullaby to assist their repose.

These notes seem pretty plainly to articulate the words which have been generally applied to them, *Whip-poor-will*, the first and last syllables being uttered with great emphasis, and the whole in about a second to each repetition; but when two or more males meet, their whip-poor-will altercations become much more rapid and incessant, as if each were straining to overpower or silence the other. When near, you often hear an introductory *cluck* between the notes. At these times, as well as at almost all others, they fly low, not more than a few feet from the surface, skimming about the house and before the door, alighting on the wood pile, or settling on the roof. Towards midnight they generally become silent, unless in clear moonlight, when they are heard with little intermission till morning. If there be a creek near, with high precipitous bushy banks, they are sure to be found in such situations. During the day they sit in the most retired, solitary and deep shaded parts of the woods, generally on high ground, where they repose in silence. When disturbed they rise within a few feet, sail low and slowly through the woods for thirty or forty yards, and generally settle on a low branch or on the ground. Their sight appears de-

ficient during the day, as, like Owls, they seem then to want that vivacity for which they are distinguished in the morning and evening twilight. They are rarely shot at, or molested; and from being thus transiently seen in the obscurity of dusk, or in the deep umbrage of the woods, no wonder their particular markings of plumage should be so little known, or that they should be confounded with the Night-hawk, whom in general appearance they so much resemble. The female begins to lay about the second week in May, selecting for this purpose the most unfrequented part of the wood, often where some brush, old logs, heaps of leaves, &c. had been lying, and always on a dry situation. The eggs are deposited on the ground, or on the leaves, not the slightest appearance of a nest being visible. These are usually two in number, in shape much resembling those of the Night-hawk, but having the ground colour much darker, and more thickly marbled with dark olive. The precise period of incubation I am unable to say.

In traversing the woods one day, in the early part of June, along the brow of a rocky declivity, a *Whip-poor-will* rose from my feet and fluttered along, sometimes prostrating herself and beating the ground with her wings, as if just expiring. Aware of her purpose, I stood still and began to examine the space immediately around me for the eggs or young, one or other of which I was certain must be near. After a long search, to my mortification, I could find neither; and was just going to abandon the spot, when I perceived somewhat like a slight mouldiness among the withered leaves, and on stooping down discovered it to be a young *Whip-poor-will*, seemingly asleep, as its eye-lids were nearly closed; or perhaps this might only be to protect its tender eyes from the glare of day. I sat down by it on the leaves, and drew it as it then appeared (see fig. 3.). It was probably not a week old. All the while I was thus engaged it neither moved its body, nor opened its eyes more than half; and I left it as I found it. After I had walked about a quarter of a mile from the spot, recollecting that I had left a pencil be-

hind, I returned and found my pencil, but the young bird was gone.

Early in June, as soon as the young appear, the notes of the male usually cease, or are heard but rarely. Towards the latter part of summer, a short time before these birds leave us, they are again occasionally heard; but their call is then not so loud—much less emphatical, and more interrupted than in spring. Early in September they move off towards the south.

The favourite places of resort for these birds are on high dry situations; in low marshy tracts of country they are seldom heard. It is probably on this account that they are scarce on the sea coast and its immediate neighbourhood; while towards the mountains they are very numerous. The Night-hawks, on the contrary, delight in these extensive sea marshes; and are much more numerous there than in the interior and higher parts of the country. But nowhere in the United States have I found the Whip-poor-will in such numbers as in that tract of country in the state of Kentucky called the Barrens. This appears to be their most congenial climate and place of residence. There, from the middle of April to the first of June, as soon as the evening twilight draws on, the shrill and confused clamours of these birds are incessant, and very surprising to a stranger. They soon, however, become extremely agreeable, the inhabitants lie down at night lulled by their whistlings; and the first approaches of dawn is announced by a general and lively chorus of the same music; while the full-toned *tooting*, as it is called, of the Pinnated Grouse, forms a very pleasing bass to the whole.

I shall not, in the manner of some, attempt to amuse the reader with a repetition of the unintelligible names given to this bird by the Indians; or the superstitious notions generally entertained of it by the same people. These seem as various as the tribes, or even families with which you converse; scarcely two of them will tell you the same story. It is easy however to observe, that this, like the Owl and other nocturnal birds, is held by them in a kind of suspicious awe, as a bird with which

they wish to have as little to do as possible. The superstition of the Indian differs very little from that of an illiterate German, a Scots Highlander, or the less informed of any other nation. It suggests ten thousand fantastic notions to each, and these, instead of being recorded with all the punctilio of the most important truths, seem only fit to be forgotten. Whatever, among either of these people, is strange and not comprehended, is usually attributed to supernatural agency; and an unexpected sight, or uncommon incident, is often ominous of good, but more generally of bad fortune, to the parties. Night, to minds of this complexion, brings with it its kindred horrors, its apparitions, strange sounds and awful sights; and this solitary and inoffensive bird being a frequent wanderer in these hours of ghosts and hobgoblins, is considered by the Indians, as being by habit and repute little better than one of them. All those people, however, are not so credulous: I have conversed with Indians who treated these silly notions with contempt.

The Whip-poor-will is never seen during the day, unless in circumstances such as have been described. Their food appears to be large moths, grasshoppers, pismires, and such insects as frequent the bark of old rotten and decaying timber. They are also expert in darting after winged insects. They will sometimes skim in the dusk, within a few feet of a person, uttering a kind of low chatter as they pass. In their migrations north, and on their return, they probably stop a day or two at some of their former stages, and do not advance in one continued flight. The Whip-poor-will was first heard this season on the second day of May in a corner of Mr. Bartram's woods, not far from the house, and for two or three mornings after in the same place, where I also saw it. From this time until the beginning of September there were none of these birds to be found, within at least one mile of the place; though I frequently made search for them. On the fourth of September the Whip-poor-will was again heard for two evenings, successively, in the same part of the woods. I also heard several of them passing, within the same week, between dusk and nine o'clock at night,

it being then clear moonlight. These repeated their notes three or four times, and were heard no more. It is highly probable that they migrate during the evening and night.

The Whip-poor-will is nine inches and a half long, and nineteen inches in extent; the bill is blackish, a full quarter of an inch long, much stronger than that of the Night-hawk, and bent a little at the point, the under mandible arched a little upwards, following the curvature of the upper; the nostrils are prominent and tubular, their openings directed forward; the mouth is extravagantly large, of a pale flesh colour within, and beset along the sides with a number of long thick elastic bristles, the longest of which extends more than half an inch beyond the point of the bill, end in fine hair, and curve inwards; these seem to serve as feelers; and prevent the escape of winged insects: the eyes are very large, full, and bluish black; the plumage above is so variegated with black, pale cream, brown, and rust colour, sprinkled and powdered in such minute streaks and spots, as to defy description; the upper part of the head is of a light brownish gray, marked with a longitudinal streak of black, with others radiating from it; the back is darker, finely streaked with a less deep black; the scapulars are very light whitish ochre, beautifully variegated with two or three oblique streaks of very deep black; the tail is rounded, consisting of ten feathers, the exterior one an inch and a quarter shorter than the middle ones, the three outer feathers on each side are blackish brown for half their length, thence pure white to the tips, the exterior one is edged with deep brown nearly to the tip; the deep brown of these feathers is regularly studded with light brown spots; the four middle ones are without the white at the ends, but beautifully marked with herring-bone figures of black and light ochre finely powdered; cheeks and sides of the head of a brown orange or burnt colour; the wings, when shut, reach scarcely to the middle of the tail, and are elegantly spotted with very light and dark brown, but are entirely without the large spot of white which distinguishes those of the Night-hawk; chin black, streaked with brown; a narrow semicircle of white

passes across the throat; breast and belly irregularly mottled and streaked with black and yellow ochre; the legs and feet are of a light purplish flesh colour, seamed with white; the former feathered before, nearly to the feet; the two exterior toes are joined to the middle one as far as the first joint by a broad membrane; the inner edge of the middle claw is pectinated, and from the circumstance of its being frequently found with small portions of down adhering to the teeth, is probably employed as a comb to rid the plumage of its head of vermin, this being the principal and almost only part so infested in all birds.

The female is about an inch less in length and in extent; the bill, mustaches, nostrils, &c. as in the male. She differs in being much lighter on the upper parts, seeming as if powdered with grains of meal; and instead of the white on the three lateral tail feathers, has them tipped for about three quarters of an inch with a cream colour; the bar across the throat is also of a brownish ochre; the cheeks and region of the eyes are brighter brownish orange, which passes also to the neck, and is sprinkled with black and specks of white; the streak over the eye is also lighter.

The young was altogether covered with fine down of a pale brown colour; the shafts or rather sheaths of the quills bluish; the point of the bill just perceptible.

Twenty species of this singular genus are now known to naturalists; of these one only belongs to Europe, one to Africa, one to New Holland, two to India, and fifteen to America.

The present species, though it approaches nearer in its plumage to that of Europe than any other of the tribe, differs from it in being entirely without the large spot of white on the wing; and in being considerably less. Its voice, and particular call, are also entirely different.

Farther to illustrate the history of this bird, the following notes are added, made at the time of dissection. Body, when stripped of the skin, less than that of the Wood Thrush; breast bone one inch in length; second stomach strongly muscular, filled with fragments of pismires and grasshoppers; skin of the bird

loose, wrinkly and scarcely attached to the flesh; flesh also loose, extremely tender; bones thin and slender; sinews and muscles of the wing feeble; distance between the tips of both mandibles, when expanded, full two inches, length of the opening one inch and a half, breadth one inch and a quarter; tongue very short, attached to the skin of the mouth, its internal part or *os hyoides* pass up the hind head, and reach to the front, like those of the Woodpecker; which enables the bird to revert the lower part of the mouth in the act of seizing insects and in calling; skull extremely light and thin, being semi-transparent, its cavity nearly half occupied by the eyes; aperture for the brain very small, the quantity not exceeding that of a Sparrow; an Owl of the same extent of wing has at least ten times as much.

Though this noted bird has been so frequently mentioned by name, and its manners taken notice of by almost every naturalist who has written on our birds, yet *personally* it has never yet been described by any writer with whose works I am acquainted. Extraordinary as this may seem, it is nevertheless true; and in proof I offer the following facts.

Three species only of this genus are found within the United States, the *Chuck-will's-widow*, the *Night-hawk*, and the *Whip-poor-will*. Catesby, in the eighth plate of his *Natural History of Carolina*, has figured the first, and in the sixteenth of his *Appendix* the second; to this he has added particulars of the Whip-poor-will, believing it to be that bird, and has ornamented his figure of the *Night-hawk* with a large bearded appendage, of which in nature it is entirely destitute. After him Mr. Edwards, in his sixty-third plate, has in like manner figured the *Night-hawk*, also adding the bristles, and calling his figure the *Whip-poor-will*, accompanying it with particulars of the notes, &c. of that bird, chiefly copied from Catesby. The next writer of eminence who has spoken of the Whip-poor-will is Mr. Pennant, justly considered as one of the most judicious and discriminating of English naturalists; but, deceived by "the lights he had," he has in his account of the Short-winged

Goatsucker,* (Arct. Zool. p. 434.) given the size, markings of plumage, &c. of the *Chuck-will's-widow*; and in the succeeding account of his Long-winged Goatsucker, describes pretty accurately the Night-hawk. Both of these birds he considers to be the Whip-poor-will, and as having the same notes and manners.

After such authorities it was less to be wondered at that many of our own citizens and some of our naturalists and writers should fall into the like mistake; as copies of the works of those English naturalists are to be found in several of our colleges, and in some of our public as well as private libraries. The means which the author of American Ornithology took to satisfy his own mind, and those of his friends, on this subject, were detailed at large, in a paper published about two years ago, in a periodical work of this city, with which extract I shall close my account of the present species.

“On the question is the Whip-poor-will and the Night-hawk one and the same bird, or are they really two distinct species, there has long been an opposition of sentiment, and many fruitless disputes. Numbers of sensible and observing people, whose intelligence and long residence in the country entitle their opinion to respect, positively assert that the Night-hawk and the Whip-poor-will are very different birds, and do not even associate together. The naturalists of Europe, however, have generally considered the two names as applicable to one and the same species; and this opinion has also been adopted by two of our most distinguished naturalists, Mr. William Bartram, of Kingessing,† and Professor Barton, of Philadelphia.‡ The writer of this, being determined to ascertain the truth by examining for himself, took the following effectual mode of settling this dis-

* The figure is by mistake called the *Long-winged Goatsucker*. See Arctic Zoology, vol. II, pl. 18.

† *Caprimulgus Americanus*, Night-hawk or Whip-poor-will. Travels, p. 292.

‡ *Caprimulgus Virginianus*, Whip-poor-will or Night-hawk. Fragments of the Natural History of Pennsylvania, p. 3. See also Amer. Phil. Trans. vol. IV, p. 208, 209, note.

puted point, the particulars of which he now submits to those interested in the question.

“Thirteen of those birds usually called Night-hawks, which dart about in the air like Swallows, and sometimes descend with rapidity from a great height, making a hollow sounding noise like that produced by blowing into the bung-hole of an empty hogshead, were shot at different times, and in different places, and accurately examined both outwardly and by dissection. Nine of these were found to be males, and four females. The former all corresponded in the markings and tints of their plumage; the latter also agreed in their marks, differing slightly from the males, though evidently of the same species. Two others were shot as they rose from the nests, or rather from the eggs, which in both cases were two in number, lying on the open ground. These also agreed in the markings of their plumage with the four preceding; and on dissection were found to be females. The eggs were also secured. A Whip-poor-will was shot in the evening, while in the act of repeating his usual and well known notes. This bird was found to be a male, differing in many remarkable particulars from all the former. Three others were shot at different times during the day, in solitary and dark shaded parts of the woods. Two of these were found to be females, one of which had been sitting on two eggs. The two females resembled each other almost exactly; the male also corresponded in its markings with the one first found; and all four were evidently of one species. The eggs differed from the former both in colour and markings.

“The differences between these two birds were as follow: the sides of the mouth in both sexes of the Whip-poor-will were beset with ranges of long and very strong bristles, extending more than half an inch beyond the point of the bill; both sexes of the Night-hawk were entirely destitute of bristles. The bill of the Whip-poor-will was also more than twice the length of that of the Night-hawk. The long wing quills, of both sexes of the Night-hawk, were of a deep brownish black, with a large spot of white nearly in their middle; and when shut the tips of

the wings extended a little *beyond* the tail. The wing quills of the Whip-poor-will, of both sexes, were beautifully spotted with light brown, had no spot of white on them, and when shut the tips of the wings did not reach to the tip of the tail by at least *two* inches. The tail of the Night-hawk was handsomely *forked*, the exterior feathers being the longest, shortening gradually to the middle ones; the tail of the Whip-poor-will was *rounded*, the exterior feathers being the shortest, lengthening gradually to the middle ones.

“After a careful examination of these and several other remarkable differences, it was impossible to withstand the conviction that these birds belonged to two distinct species of the same genus, differing in size, colour, and conformation of parts.

“A statement of the principal of these facts having been laid before Mr. Bartram, together with a male and female of each of the above mentioned species, and also a male of the Great Virginian Bat, or *Chuck-will's-widow*, after a particular examination that venerable naturalist was pleased to declare himself fully satisfied; adding that he had now no doubt of the Night-hawk and the Whip-poor-will being two very distinct species of *Caprimulgus*.

“It is not the intention of the writer of this to enter at present into a description of either the plumage, manners, migrations, or economy of these birds, the range of country they inhabit, or the superstitious notions entertained of them; his only object at present is the correction of an error, which, from the respectability of those by whom it was unwarily adopted, has been but too extensively disseminated, and received by too many as a truth.”

14 DAY USE
RETURN TO DESK FROM WHICH BORROWED

BIOLOGY LIBRARY

TEL. NO. 642-2531

This book is due on the last date stamped below, or
on the date to which renewed.

Renewed books are subject to immediate recall.

DEC 26 1973
RETURNED TO

DEC 17 '73 9

BIOLOGY LIBRARY

LD 21A-15m-2,'69
(J6057s10)476-A-32

General Library
University of California
Berkeley

